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JAN 14 1922

CATALOGUE  
NORTHROP KING & CO'S  
SEEDS AND FEEDS

WHOLESALE ONLY



SAVE FOR REFERENCE

# Save This Catalogue - A Reference Book On Seeds and Feeds

**I**N this book we have endeavored to give interesting and instructive descriptions of each variety, so that the reader may choose wisely for his particular purposes. Cultural directions are given on practically all of the varieties in most common use. You will find here every item of vegetable, flower and field seed suitable for planting in the Northwest.

Dealers are frequently called upon to provide information on many phases of gardening and field crop production and we have planned our listings, descriptions and general information with this thought in mind. The vegetables come first, alphabetically arranged. The numbers preceding each variety name are intended to assure accuracy in filling orders. When making out an order it is advisable to list both the number and the variety. Where early and late sorts of a variety are

listed they are arranged in the order of their earliness. The flower seed pages list first the annuals and then the perennials. The illustrations and cultural directions are especially interesting on these pages.

Field Seeds, grasses, grains etc. are thoroughly covered. Seed corn is given special attention with more practical information about varieties than has previously been listed in a catalogue. Lawn seeds and Fertilizers are next covered, and then follow four pages of instructive articles on Sterling Poultry Feeds. These pages, especially those pertaining to Sterling Mashers, should be read carefully. Sterling Buttermilk Mash saves chicks and develops them into better layers. The illustrations give a comprehensive idea of the bag designs except the color. Always remember the radiating stripes are bright red on our bags of Sterling Feeds.

## Our Seeds and Feeds Sold Only Through Dealers

### Except At Our City Store In Minneapolis

We conduct no mail order business direct with consumers. The only retail business we do is at our City Store, 14 Western Ave., Minneapolis, and this is of purely local character, without conflict with dealers.

Our general business over the Northwest is transacted with about 20,000 dealers. Our advertising features the lines "Sold by Local Dealers." Inquiries received from customers are referred to dealers nearest the prospects.

It is our aim to fill rush orders the day received and we usually are able to do this. Unless there is a shortage of some variety and the consequent brisk demand, we carry sufficient stocks so that we are able to give very prompt attention to all orders.



### Good Seed A Builder Of Confidence and Good Business

Good seeds make good friends. Poor seeds are likely to break down all confidence between seller and buyer. The average dealer or farmer cannot distinguish between good and fair to poor seed, because it usually requires laboratory experience and equipment to make such comparisons. When a dealer or a farmer lets "sight" judgment decide in favor of a cheap lot of seed he frequently becomes the victim. The safe way to buy seeds is to select those sold under a known brand and having a reputation for good crops over a period of many years.

We have been supplying seed to the Northwest since 1884. Our brands Sterling, Northland and Viking, assure quality amply commensurate with the price asked.

## Northrup, King & Co.'s Seeds Are Bred For Hardiness, Productiveness and Quality. Scientifically Cleaned and Tested For Purity and Germination.

We handle only such seed as is adapted for planting in the territory in which we sell. Every lot of our seed, whether for garden, field or lawn, is carefully cleaned and tested and its quality standard assured before we offer it for sale. Several of our principal items are grown under our own supervision, all others being obtained from localities where the best qualities are produced. The best seed obtainable

costs very little more per acre than ordinary seed but it means cleaner land, surer crops, better quality and larger yield in bushels and tons. The big items of cost in farming are the land, labor and machinery. Why should any farmer gamble with these big costs just to save a few cents per acre on the seed? Northrup, King & Co.'s trademarks on bags of seeds give assurance of dependability.



### Prices Listed On Flower Seeds Are For Retail Guidance

Wholesale price lists are always available to dealers, so we have found it advisable to list retail prices on Flower Seeds in our catalogue. Vegetable prices are listed on a separate sheet.

### Disclaimer

As seeds, plants and bulbs are subject to climatic and other conditions over which we have no control, after once being placed in the ground, therefore, we give no warranty, express or implied, as to description, quality, productiveness or any other matter of any seeds, plants or bulbs we send out, and we will not be in any way responsible for the crop, **NORTHROP, KING & CO., Minneapolis**







**G. C. THOMSON**  
MANAGER GARDEN SEED DEPT.  
DIRECTOR



**L. M. KING**  
VICE PRES. and TREASURER



**C. C. MASSIE**  
PRESIDENT and GEN'L. MANAGER



**C. A. BURNHAM**  
SECY and SALES MANAGER



**H. C. FISHER**  
BUYING DEPARTMENT  
DIRECTOR



**A. E. BATHER**  
BUYING DEPT.

## An Organization And Equipment for Better Seed Service To Dealers



**C. A. BUSH**  
MANAGER SEED CORN DEPT.



**J. H. WITHEY**  
BUYING DEPT.

**R**EAL Seed Service consists of more than the prompt delivery of an order. Back of such service there must be the intelligent co-operation of many minds, each trained to efficiently execute its individual duties.

There must also be adequate mechanical equipment, immense storage space and financial resources. Large quantities of seeds must be quickly available to dealers and planters just previous to the planting season and only the large seed house has facilities for cleaning, storing and distributing sufficient stocks of a general line.

Even in Field Seeds no community raises sufficient stocks to supply itself with all the varieties it grows. Very few communities raise any vegetable or flower seeds at all—so the large seed house serves a great need by gathering in its storerooms, ample stocks of the world's best seeds of all varieties, ready for quick distribution wherever needed.

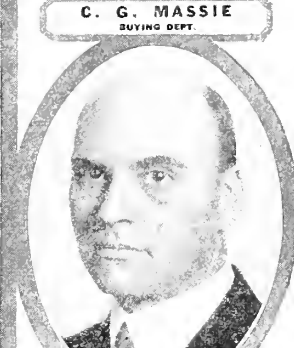
Northrup, King & Co. has been in the seed business in Minneapolis since 1884. It is no easy task to start a general seed business and this firm had its share of difficulties in the early years—but in spite



**C. G. MASSIE**  
BUYING DEPT.



**A. K. BUSH**  
FARM CROP SPECIALIST



**H. H. WILLIAMS**  
GENERAL SUPERINTENDENT



**H. F. SEWELL**  
ADVERTISING MANAGER



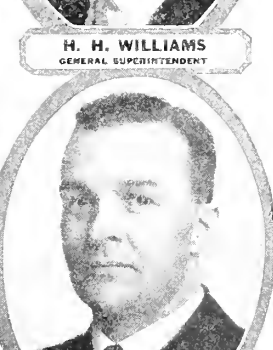
**J. G. MANN**  
TRAFFIC MANAGER



**C. N. BARRETT**  
MANAGER FEED DEPT.



**H. G. PETERSON**  
OFFICE MANAGER



**J. E. LEDBETTER**  
CREDIT MANAGER



**J. A. SHELTON**  
BRANCH MANAGER



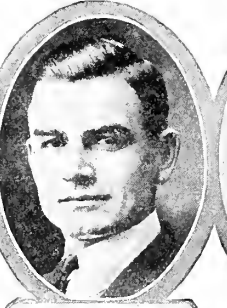
**H. R. STANCHFIELD**  
SALES DEPT.



**I. S. LINDQUIST**  
ASST. SALES MANAGER



**C. R. WILCOX**  
SALES DEPT.



**A. R. BLACKBOURN**  
SALES DEPT.



**F. J. BOODY**  
BUYING AND SALES DEPTS.



**T. A. WATERS**  
BUYING DEPT.

of these difficulties, it was staunch in the maintenance of the policy established for the firm at its inception. The following statement of policy appeared on the introductory pages of the first catalogue issued in January, 1885:

"We have brought to our new enterprise not only a thorough knowledge of the business, in which each member of the firm has been educated from boyhood, but old-fashioned ideas as to the duties we owe to those who confide their interests to our care, believing, as we do, that the purchase of a package of seeds, however small, involves a trust to which the Seedsman should honestly and honorably respond. We make our stand on Good Pure Seeds; and we know you will say that is the right thing to do.

"When price becomes the first consideration, in so important a thing as seeds, quality must become the second, and while the exercise of proper economy is a most commendable thing, the purchaser who seeks to obtain good seeds at less than their real value, in nine cases out of ten becomes his own victim. We, therefore, wish to state most emphatically that **WE DO NOT GROW, PURCHASE OR**



**Wm. MIOOLETON**  
MANAGER GROWING STATION



**W. C. BRACKEN**  
PACKET SALES DEPT.



**W. F. BRINK**  
ACCOUNTING DEPT.



**L. C. WEBER**  
BRANCH MANAGER



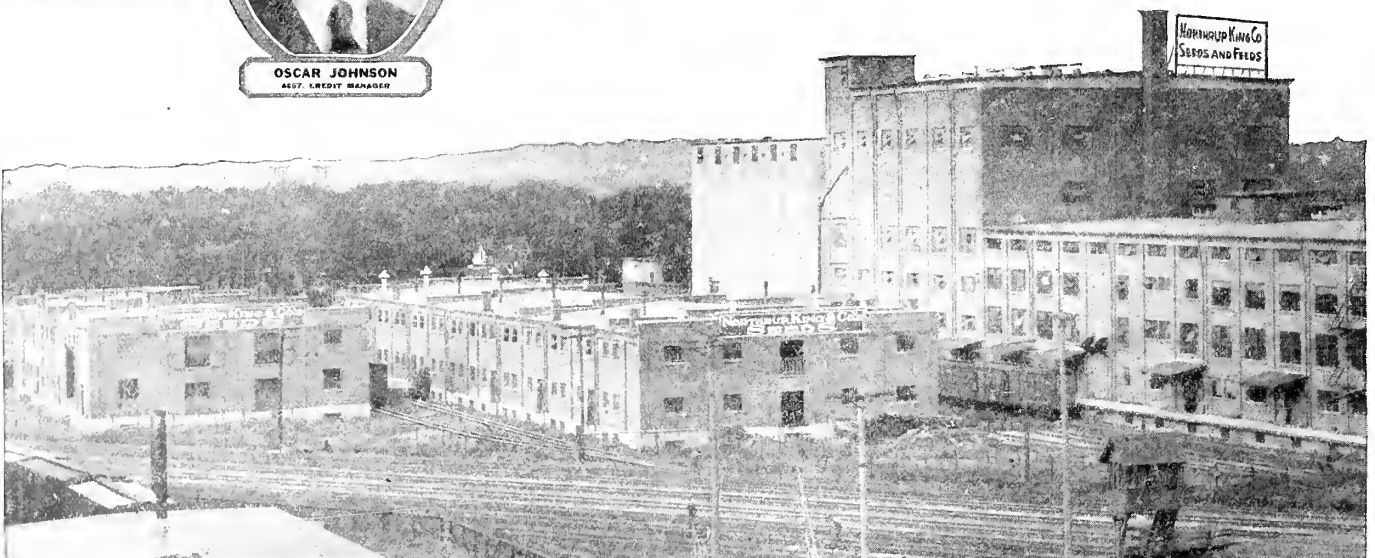
**OSCAR JOHNSON**  
ASST. CREDIT MANAGER



**L. S. BISHOP**  
MINNEAPOLIS STORE

Below across the two pages, is shown a general view of our plant. The building at the extreme left is the Onion Set Warehouse. Next to it is the Sterling Seed Corn Warehouse with fire drying rooms at each end. These buildings are connected to the main plant by subways. Next is the Main Building 420 ft. long with six concrete storage tanks at the end. The high part of the building is used by the seed cleaning department and the feed mills. The second floor in the rest of the building is devoted to the office and the 3rd floor to the packet seed department.

The rest of the building is devoted to storage. The building at the extreme right is our box factory and box storage. Here all our packet Seed Boxes are built and the returned boxes repaired each year.





**N. J. McGRATH**  
GENERAL FOREMAN



**F. A. WILLIAMS**  
Seed Corn and Grain Set Warehouse



**A. W. GUSTAFSON**  
SHIPPING DEPT.



**A. T. ROBINSON**  
SEED CLEANING DEPT.



**G. J. HOFFMAN**  
RAILROAD SHIPMENTS



**T. C. BENSON**  
BULK GARDEN SEED DEPT.



**C. W. QUILLING**  
PACKET DEPT.



**BEN JOHNSON**  
BOX FACTORY

**SELL CHEAP SEEDS**, but seek to obtain such prices as will afford us fair remuneration for the care, labor and expense involved in the proper conduct of a Legitimate Seed Business.

"In no case will we send out goods that we do not believe will give satisfaction to the purchaser, and reflect credit on ourselves. This **IS OUR PLATFORM**, and on this basis we solicit your orders."

The first home of the business was in an ordinary store at old "Bridge Square." Later another store was added and in 1895 the company moved into the new building at Hennepin and First street, where it remained until 1917. For several years previous to 1917, this building was inadequate and large warehouse space outside was rented. The demands of the business for more room and greater facilities led to the erection of the present home on a 9-acre tract between 14th and 18th Ave. N. E. facing Jackson street. The series of buildings on this site were built by us and designed expressly for the installation of most modern methods for handling seeds.

When our plant is in full operation there are over 400 men and women employed.

Here we have, in addition to our skilled members of our business office, experts on agriculture, seed crop specialists, seed analysts and laboratory experts, seed cleaning and curing experts, feed specialists, traffic and credit experts, carpenters, machinists, electricians, printers, machine operators, truck drivers, etc. In the portrait groups appearing on these pages are shown the men who have charge of the various departments. Very few have been with us less than five years, many having been here fifteen to twenty-five years.



**J. H. COFFEY**  
MILLWRIGHT



**J. C. MORAN**  
ENGINEER



**I. S. BOYNTON**  
PRINTING DEPT.

At the extreme right of the last building is a plot of ground which we use as a test garden. Another plot is located at the opposite side of the building. In these plots we test out our vegetable and flower seed stocks each year. The tests are made under average growing conditions.







J. H. PETERSON  
POULTRY SPECIALIST



W. H. FORSYTH  
EAST CENTRAL MINNESOTA



JOHN CHRISTENSEN  
SOUTHERN MINNESOTA



H. I. FAULSRUD  
WEST CENTRAL MINNESOTA



L. F. GOSSMAN  
SOUTH CENTRAL MINNESOTA



H. E. FRIEDLUND  
MINNEAPOLIS



CHAS. FORSYTH  
NORTH DAKOTA



W. W. FORSMAN



O. O. KNUTSON  
SO. DAKOTA



C. A. OPPEL  
WEST CENTRAL IOWA



O. W. FRIEDLUND  
EAST CENTRAL IOWA



E. O. DENISON  
WESTERN IOWA



A. F. BUCKLES  
FORT DODGE BRANCH



G. H. GARDNER  
EASTERN IOWA

## Northrup, King & Co.'s Traveling Sales Staff Covering Northwestern States

THE eighteen men on this page comprise the staff which is constantly in touch with the trade in the Northwestern states. They are in frequent communication with the home office by mail, phone and telegraph and their knowledge of the trend of markets is valuable to every dealer. Twice, sometimes three times a year all our salesmen are called to the home office for conferences which fit them to give better service to the merchants with whom we deal. Every angle of our sales work is covered,—available stocks, quality, probable trend of prices, dealers' sales helps, advertising, credit, traffic and the policy of the house on all matters pertaining to the sale of seeds and feeds.

We know that dealers appreciate calls from men who are more than mere order-takers. We aim to choose salesmen who are alert for sales ideas and who make it their business to study each particular dealer's needs, that they may be of real service in suggesting quantity as well as the items of stocks to be purchased and methods of moving these stocks.

Nine of the men in this group began their service with us ten years or more ago—the others one to five years. In many instances, our dealers never visit our main plant and the only personal contact we enjoy is through our salesmen.

In the summer we send out a special staff of salesmen to check up our Packet Seed boxes and sell our packet seed service for the next year. In addition, this army of about fifty salesmen book orders for bulk garden seed, popcorn, lawn seed and any other items of our line which dealers may be interested in for future delivery. The entire western half of the United States, excepting California, Arizona and New Mexico, is covered by this staff, the men traveling in automobiles and visiting every town and village as well as the larger cities.



W. J. BRIGHT  
MINNEAPOLIS



J. D. PERKINS  
NO. WISCONSIN & SO. MICHIGAN



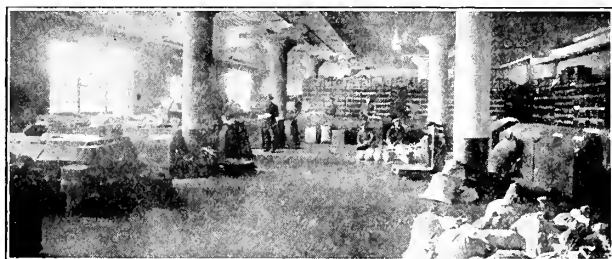
G. P. HAMILTON  
NORTH CENTRAL WISCONSIN



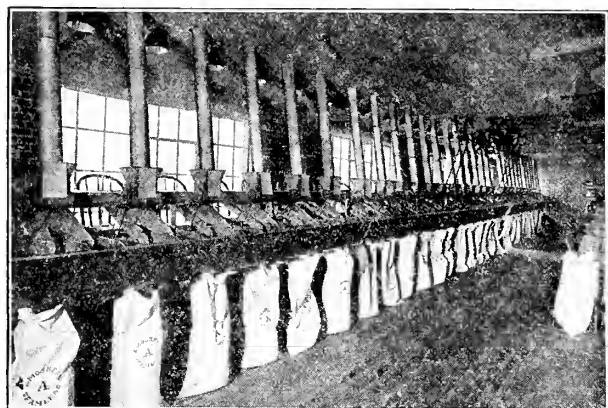
G. L. WERTZ  
SOUTH CENTRAL WISCONSIN



In this general office all business of the firm is directed and recorded. About 100 people are in the office staff.



Bulk Garden Seed Department. Here all the special orders for garden seed are carefully put up and made ready for shipment.



This battery of machines is used to hand pick our beans and peas. An operator is stationed at each machine and all discolored or shrunken seeds are removed.

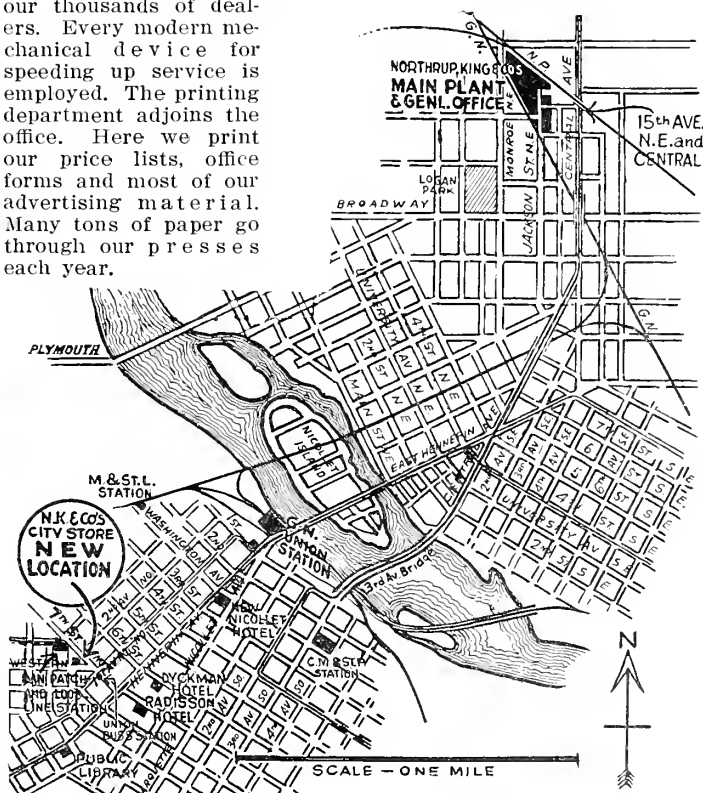


Onion Sets are stored in tiers of crates in our special onion warehouse. From 45 to 75 carloads are usually handled by us each year.

## NORTHRUP, KING & CO.'S BUILDINGS and EQUIPMENT

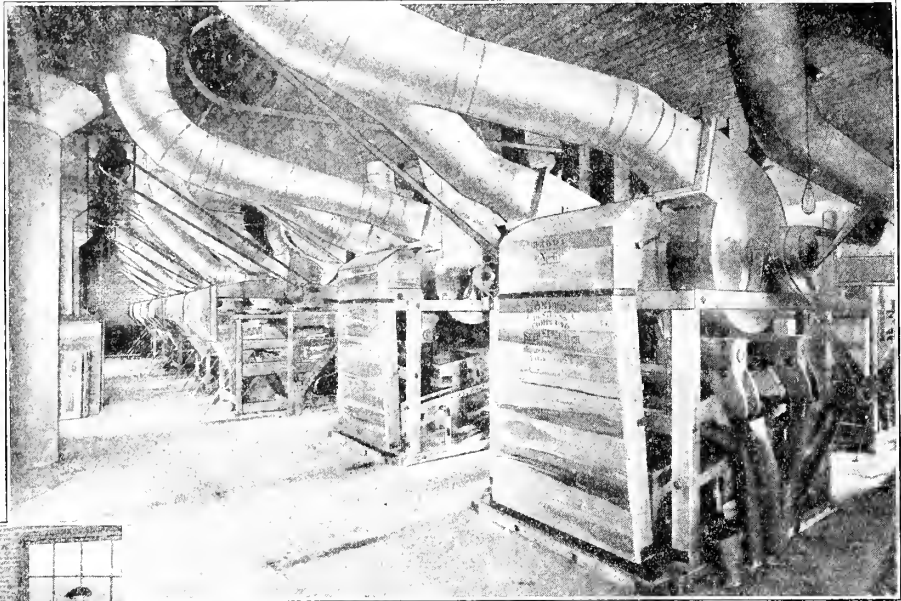
IN THIS brief article on our main plant at Minneapolis we shall try to give a general idea of our facilities and endeavors to provide dependable seed service. Every year we have the opportunity of personally conducting many of our dealers through our plant and our invitation for such a personally conducted tour is extended to every dealer who sells seeds. However, thousands of our best dealers do not find it possible to visit us and we believe they will be interested in what we have that will help serve them better.

Upon entering the main building, built of reinforced concrete, tourists are first directed to the general office on the second floor, occupying floor space about 100 ft. by 200 ft. Here, over 100 service people handle all the varied items of business from our thousands of dealers. Every modern mechanical device for speeding up service is employed. The printing department adjoins the office. Here we print our price lists, office forms and most of our advertising material. Many tons of paper go through our presses each year.

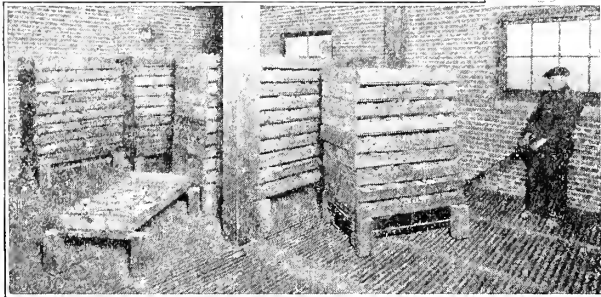




Hand sorting Sterling Seed Corn at our corn house. This is the second sorting before it goes to the sheller.



This immense battery of screen and air blast mills is only a part of our cleaning equipment. Every separation known to the commercial seed trade can be made here.



This picture shows the second floor of one of our drying rooms. Notice the grated floor which allows free circulation of the warm air throughout the room.



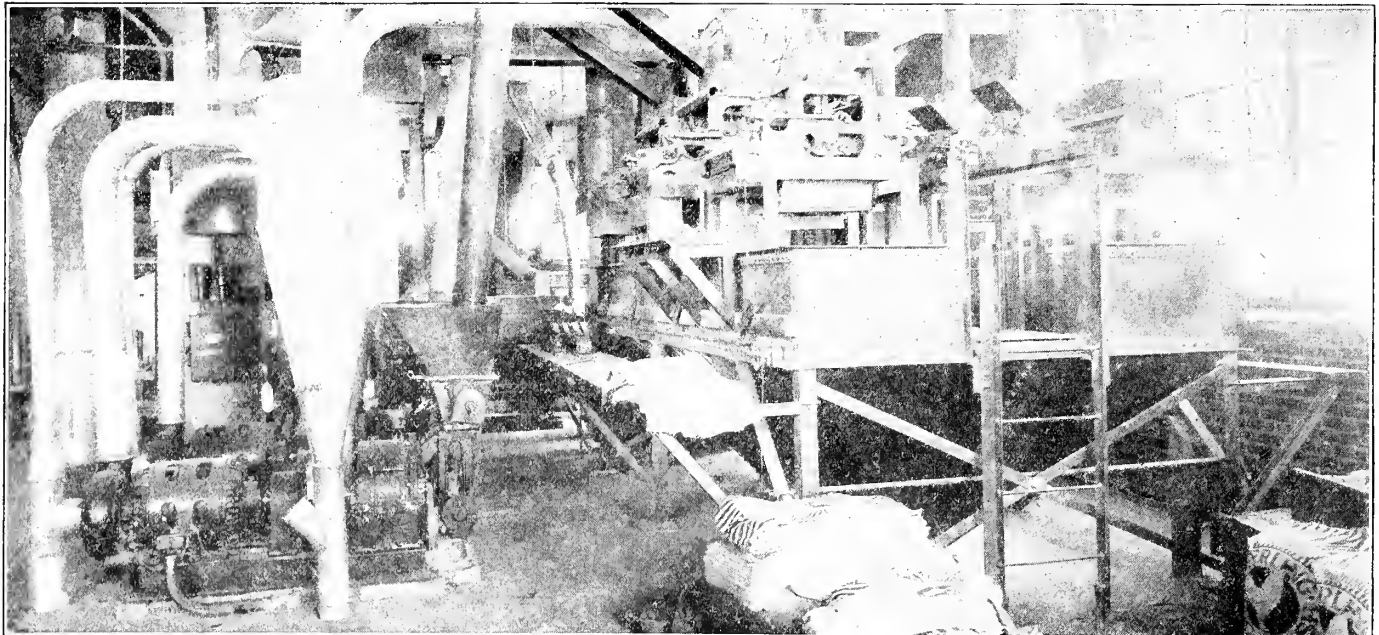
Looking down on the tops of tiers of racks of Sterling Seed Corn being dried on the second floor of one of our drying rooms.

Next we visit the Bulk Garden Seed Dept., where all orders for garden seeds, other than packets, are put up. Since the orders all vary in size, each item must be put up by hand. A large, experienced force is maintained to assure speed and accuracy.

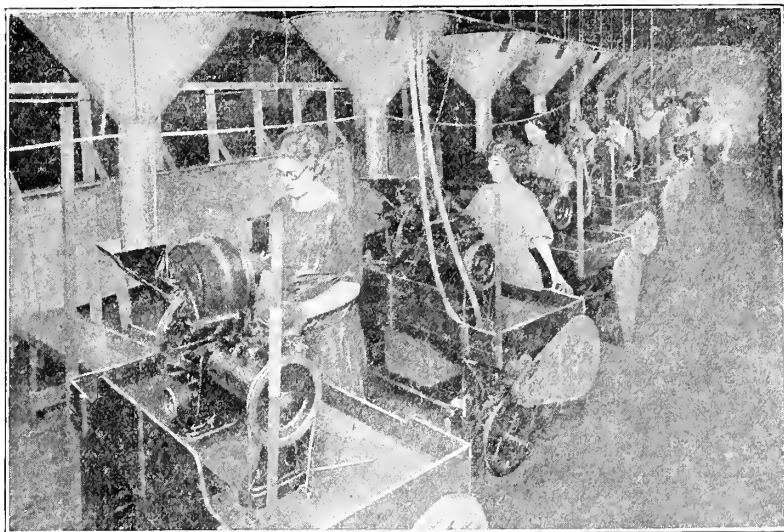
The elevator then takes our party to the sixth or top floor to see how the stocks of seed, after being unloaded from cars, are elevated and distributed to the seed storage tanks or bins by means of belt conveyors. The storage tanks alone have a capacity of 165,000 bushels. On the floor below are located rows of steel bins, each with outlets so arranged that its contents may be conveyed to the several types of cleaning mills located on the fourth floor. The mill floor is a busy one. Every type of seed cleaning machine is employed here and any separation known to the commercial seed trade can be made. Dealers enjoy hearing our genial foreman explain the working of each machine.

On this floor, also, are located the corn grinders and polishers used in preparing corn for our Sterling Poultry Feeds. And another complicated but very accurate machine seen here is our scratch grain mixer. It is by means of this machine that we maintain uniformity in our Sterling Scratch Feed, Sterling Chick Feed, etc. The scales for each ingredient are set and the machine does the rest, operating automatically so long as the supply of all in-

Below is a view in our Feed Mill. The large machine to the right is the automatic scratch grain mixer. In the left foreground are grinders and in the background are the corn graders and polishers.







This battery of machines measures the seeds, fills, seals, and counts our packets of vegetable and flower seeds. Capacity, 500,000 per day.

Ingredients is maintained, but stops immediately when the supply of any ingredient is exhausted. The mixers for our Sterling Mash Feeds are also on this floor. The next two floors below—the third and second—in the mill end of the building, are devoted to bag filling equipment and to storage. The first floor is occupied largely by the shipping and receiving departments. Loading platforms are built on two sides of this floor, level with freight car doors. Trackage on both sides enables us to truck our orders directly into the freight cars or large motor trucks.

The basement is devoted to storage, conveying machinery, boiler rooms, electrical switchboards, etc. A wide concrete subway connects this floor with the Seed Corn and Onion Set warehouses. The Seed Corn warehouse is 302 ft. long by 74 ft. wide, two stories and basement. Our specially constructed warm-air drying rooms are located on each end of this building. Here each fall we dry Sterling Seed Corn to 12 per cent moisture before severe cold weather sets in. The Onion Set warehouse is 158 x 67 feet, two stories and basement, and has a capacity of 60,000 bushels. This company is known as "Headquarters for Onion Sets in the Northwest" and offers to its dealers only the finest of northern grown stock.

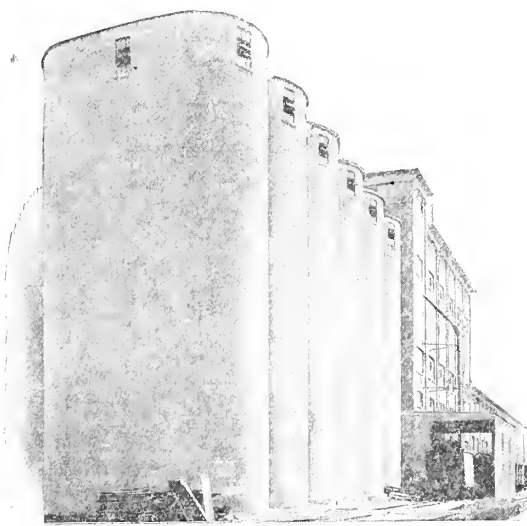
Another subway at the south end of the main building leads to the seed box factory and warehouse. This building is two stories and basement. Several of the machines used here were constructed especially for our use. All our Sterling Seed Boxes are built in this shop and each year, as they are returned after the planting season, they are repaired and refinished here.

An enclosed bridge connects the box factory with the third floor of the main building, at the end devoted to the filling of our Sterling Commission Boxes. This section of our plant is one of the most interesting to visit because of its variety of action. Here are machines, with automatic scales, which fill and seal our cartons of peas, beans, sweet corn, lawn seed and King and Queen Popcorn. Another battery of machines measures the seed, fills, seals and counts our packets of vegetable and flower seeds. Over 500,000 packets are filled each day by this equipment.

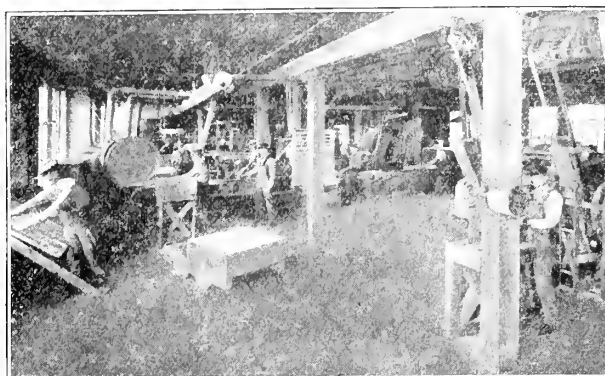
The battery of conveyors for hand picking beans and peas is also located on this floor. Visitors who see how carefully this work is done understand why our beans and peas are so uniformly clean, plump and of even color. See illustrations page 5.

Before leaving the third floor visitors are always interested in visiting our cafeteria. Here lunch is served to several hundred of our people each noon. A standing invitation is extended to our dealers to plan their visit so they can enjoy a meal in this modern lunch room. It is operated at cost for our employees.

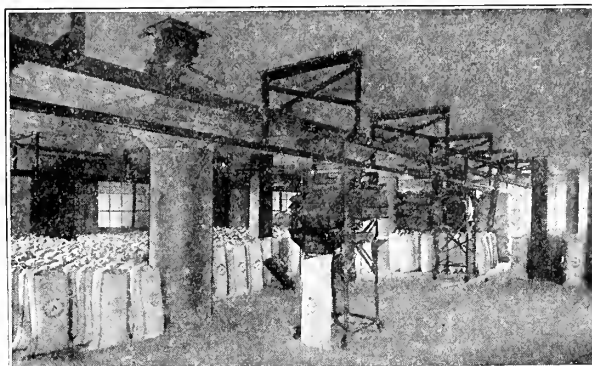
There is one more point of interest we wish every dealer to see and that is our laboratory. After seeing the cleaning plant and learning how thoroughly all kinds of weed seeds can be eliminated from grass and field crop seeds, it is doubly interesting to see how tests are made for germination and what is behind the purity test figure on each bag of our seeds. The laboratory work is covered quite fully on page 10. After reading this article you will have a fair idea of our equipment. To see our plant, however, is the only method by which you can obtain a real conception of its size or of the thoroughness of service offered to dealers. Come and visit us soon. We believe you will be astonished, and well repaid for the short ride out of the business district of Minneapolis.



These six concrete storage tanks contain many seed bins with a total capacity of 165,000 bushels.



In this modern box factory our seed boxes are built and repaired, many thousands being handled each fall and winter.



These automatic scales are movable and may be connected with any of our seed storage bins on floor above.



Hundreds of thousands of dollars worth of seeds are stored on several floors awaiting the spring shipping season.

# Northrup, King & Co.'s Vegetable and Flower Seeds In Packets and Cartons

## High Quality Seed, Carefully Tested

The name of Northrup, King & Co. and the Sterling Trademark on a package are assurance of the best seed obtainable. For over 40 years we have been handling seeds of all kinds, during which time the very highest standards of quality have been maintained.

Our seed stocks are grown where crops of the best quality are produced. Certain localities favor the production of certain varieties and through our many years of experience we know where to obtain the very choicest stocks of all seeds listed in this catalogue.

*This is a "C" Box.*

*Other sizes to fit*

*every dealers needs.*

Several varieties are grown under our personal supervision and from our own seed stocks.



## Fresh Packets Every Year

We protect the dealer and planter against old seeds and musty packets by collecting all unsold packets each summer. These are returned to our Minneapolis plant, where the packets are destroyed. The seed boxes are refinished and relabeled and fresh new packets, containing recently tested seeds, are placed in the tiers immediately before delivery each season. Selection may be made from our Sterling Seed Boxes with confidence that each packet contains vigorous, high quality seeds which will produce vegetables or flowers true to type.

## Sold By Over 25 000 Dealers

The fact that our seeds are sold by so many dealers brings up two important thoughts: First, that any merchandise which extends its sales so widely must have exceptional merit. Second, that packet seeds so extensively distributed are available to practically everyone in the villages, towns and cities of the Northwest.

These seeds are sold only from the boxes in our dealers' stores. We do no mail order business with consumers direct. We also make it easy for merchants to handle this excellent line by placing them on commission, so we carry the entire investment.

The reputation of our name, the quality of the seeds and the wide publicity given them throughout the planting season, make them very popular with the gardening public. The average home gardener's complete needs can be supplied from one of our boxes, so many merchants are finding it more profitable to concentrate all packet business to this one line, thereby saving floor space in their stores and avoiding the loss of time incident to keeping up stocks in several boxes as well as the several settlements. Any dealer who also wishes to sell bulk garden seeds can be promptly supplied by us—a complete service.

## Special Seed Assortments For Each Section

Climatic conditions as well as personal tastes decide the selection of items for the assortments sent to the various parts of the country. This has been a study with us for many years and our dealers will find that our assortments are all good sellers. In every assortment there are always a few items that have the largest sale—others, for which there is only small demand. We provide for this in the number of packets of each variety. When any variety is selling out, we quickly supply extra packets on the same commission basis as the original box assortment.

## An Excellent Salesman

Give it an opportunity to show its worth and the Sterling Seed Box will not fail. It works every minute a store is open. It takes very little space, stands upright and commands the attention of every patron who passes it. The convenience with which the packets can be selected appeals to women, especially, and they are large buyers of packet seeds. Practically no clerical attention is necessary, as patrons make their own selections and then take the clerk's time only to pay for the packets.

## Our Bulk Garden Seeds Are Of Same Quality

In every community there are gardeners who plant quite large areas of certain varieties, and these people prefer to buy their seed in bulk. Many of our dealers have built up very profitable seed businesses from a small start with our bulk garden seeds. We are prepared to assist beginners with suggestions for size of stock, signs, labels and publicity material. Wholesale garden seed price lists will be mailed to dealers on request.

# All Standard Size Vegetable Packets

# 5<sup>c</sup>

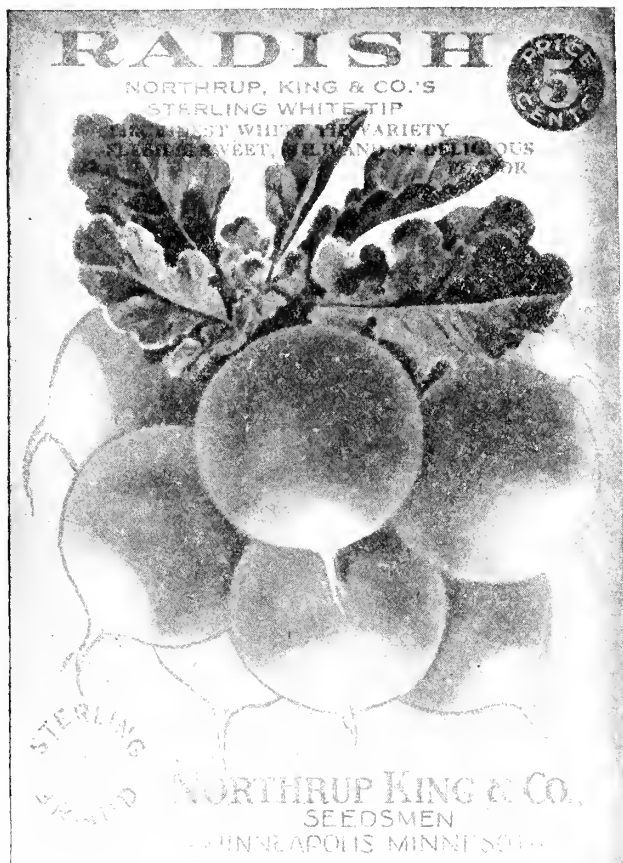
## Most Of The Flower Seeds Also 5 cents

With the exception of one year, during which time all prices were forced upward, the retail selling price of our standard size vegetable packets has been maintained at 5 cents. Most of the flower seeds in standard size packets also sell at 5c—a few being listed at 10c. Our packets are large and well filled, containing, on the average, as much seed as those of any other brand. No better seeds can be obtained at any price.

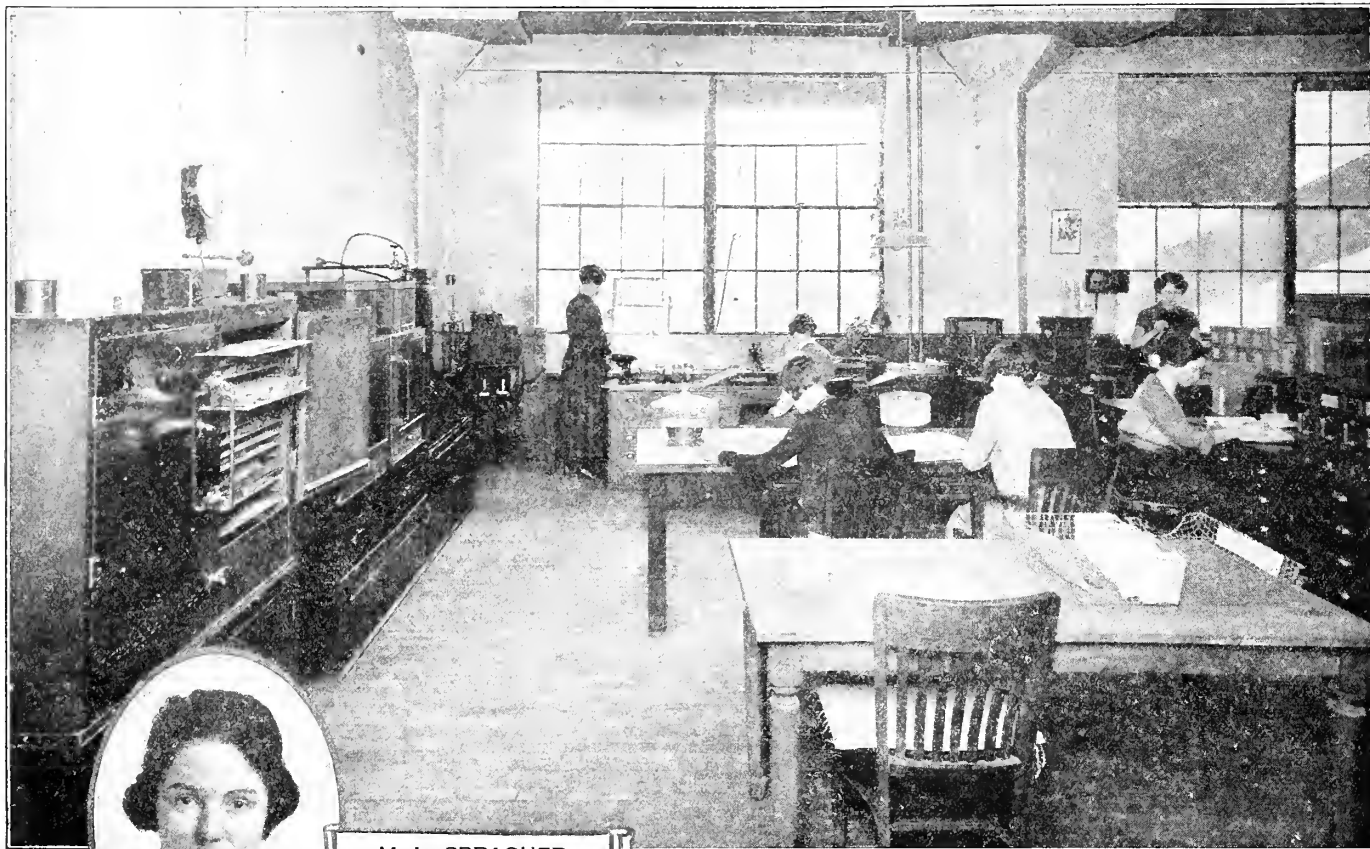
## An Attractive Display

From the standpoint of attractiveness there is nothing better offered than the Sterling Seed Box. Viewed from the front the box itself is very inconspicuous but the rows and tiers of bright packets stand out like a flower garden in bloom. The designs on our packets are beautifully lithographed in eight colors. The illustrations are very accurately made so that one may know the type of vegetable or flower he may expect from the seed in the packet selected.

The illustrations on this page show actual size of our Packets, Mammoth Packets and Cartons.







**M. L. SPRACHER**  
CHIEF SEED ANALYST

The electrically heated germinators are shown along the left wall. The daylight germinators are by the windows. Other equipment is conveniently placed.

## Northrup, King & Co.'s Fully Equipped Modern Seed Testing Laboratory

THE germination, purity and other test figures on tags attached to bags of Northrup, King & Company's seeds mean more than mere compliance with law. They have been obtained, after very complete tests, by Miss M. L. Spracher, one of the country's best seed analysts, having at her command the modern equipment of our large laboratory shown above.

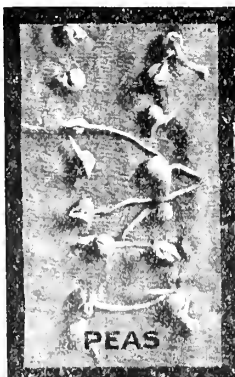
Miss Spracher is a graduate of Nebraska Wesleyan University with two years of post-graduate work, specializing in botany, at the University of Nebraska. She has since occupied positions in the U. S. Department of Agriculture Seed Laboratory at Washington, D. C., has had charge of the Department's Branch Seed Laboratory in Missouri, temporary charge of Branches in California and Oregon, as well as charge of the Commercial Seed Laboratory, which serves the Toledo Produce Exchange. She is a member of the Association of Commercial Seed Analysts of North America, an organization limited to analysts of highest technical training and with several years of actual seed testing laboratory experience. Each year Miss Spracher participates in a series of tests known as the Official Referee Tests, which are the equivalent of an annual examination on technical ability. It is on the results from these tests that the laboratories of the various states, Federal Government and Dominion of Canada are graded and certified.

Our laboratory equipment permits testing over one thousand samples for germination at one time, using the official government method. From September 1st to April we operate at full capacity most of the time. For this work we use four large germinators electrically heated with temperatures controlled by thermostat, and water cooled. A modern daylight germinator and glass bell jars are used when these methods give more practical results.

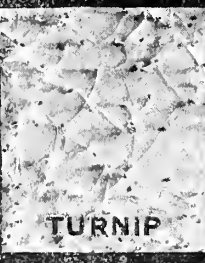
To determine the purity of a lot of seed a small quantity is taken from each bag and sent to the laboratory. Here it is thoroughly mixed, divided and redivided until a small representative quantity is obtained. It is then carefully weighed and separated into four parts;—pure seed, inert matter (broken seeds, dirt, etc.), weed seeds, and other crop seeds. All seeds other than the kind being tested are identified and recorded. Each part of the sample is weighed and the per cent of each figured by weight. In testing very small seeds it is not practical to separate a large quantity, hence very delicate scales must be used. Our Chaimomatic Balance weighs accurately one milligram or one 450,000th of a pound. It is also necessary to use strong magnifiers on these small seeds and frequently the binocular microscope, which increases the size 40 diameters, must be resorted to to make positive identification. The binocular microscope is the surest means of determining the presence of wild mustard in rape seed. The blower or air blast separator is an accurate aid in separating chaff and dust from the seed.

By means of a special apparatus the per cent of moisture in corn is obtained. Exact information as to moisture content is vital in the curing and handling of corn. Moisture tests are made when the corn arrives at our plant, during the process of curing, and again as the corn comes from the mills to be sacked. Frequent germination tests are made during the curing process and every lot of corn in the house is tested each month during the spring. There is no guessing about the condition of our corn.

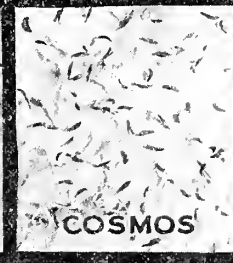
Samples of all lots tested are filed away for future reference. A complete test record for each lot is also filed and becomes a part of our permanent records. This is maintained as a protection both to ourselves and our dealers.



PEAS



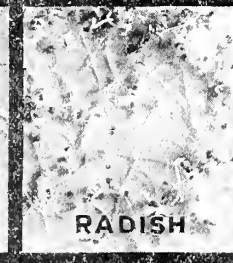
TURNIP



COSMOS



ALSIKE CLOVER



RADISH



BARLEY

# VEGETABLE SEEDS

## ARTICHOKE

### 5. Green Globe.

The seed may be sown indoors and plants potted same as the Tomato and set out in the garden on approach of warm weather; or the seed can be sown in hills outside, and thinned out to one plant in a hill. Plants should be set in rows three feet apart and two to three feet apart in the row. Grown for the unripe flower heads, which are highly esteemed by epicures.

### Artichoke Roots.

Extremely valuable food for hogs. Every hog raiser should plant them. After one acre is planted their value will be so appreciated that larger areas will be devoted to them. They are not only very healthful, but as a fattening agent are excellent. They yield very heavily, 300 to 350 bushels to the acre being realized on good soil. It is not necessary to dig them for, if given an opportunity, the hogs will help themselves.

Not only are they valuable for hogs, but are an excellent food for cattle, sheep and horses. Fed to milch cows, they are almost equal to bran for the production of milk because of their succulency.

Artichokes need planting but once and little or no culture after the first year. Cut as potatoes, only smaller; plant in rows three and one-half feet apart. Plow deep, plant shallow, say two inches. The second year, break up the ground as for corn; they will come up thickly all over the surface. Run through each way with a cultivator when a few inches high.

Those wishing to purchase should place orders very early, to be shipped as soon as favorable weather arrives. 150 lbs., sufficient for one acre.

## ASPARAGUS SEED

**Culture.** To start the Asparagus bed from seed, sow 1 oz. to 50 feet of row in early Spring, and transplant to permanent bed the next year as outlined under the heading "Asparagus Roots."

One pound of seed will produce about 3000 sprouts, and should be sown in a light, rich, sandy soil in rows about 15 inches apart and 1½ inches deep; sow thinly enough so the plants will not stand closer than 1½ or 2 inches and these should be thinned by hand afterwards, to about three inches apart, care being taken to leave the strongest and most thrifty shoots.

Careful weeding and hoeing are required throughout the growing season. Watering between the rows with liquid manure is of great assistance to the young plants.

### 10. Bonvallet's Giant.

The quickest yielding, (a year ahead of seed of other sorts) heaviest producing, finest quality and most disease-resisting of any variety; in color, white with purple tip. Market gardeners are discarding other well known sorts in favor of this variety.

### 15. Columbian Mammoth White.

Gives immense yield of clear white roots. A most distinct and valuable variety. The shoots remain white, without earthing or artificial blanching, as long as fit for use.

### 20. Conover's Colossal.

A standard sort, color deep green, quality first-class, spreads less than other sorts. Yields from 15 to 30 sprouts from a single plant.

### 21. Washington Rust Resistant.

A new variety, the result of plant breeding selection by the U. S. Department of Agriculture. Rust Resistant and vigorous.

### 22. French Giant Argenteuil.

A splendid, vigorous variety that grows very large, the stalks sometimes weighing four ounces each. This is a very prolific variety and forms the greater part of the fine bundles admired in the Paris markets.

### 25. Palmetto.

Mammoth in size, light green, regular in growth and appearance. Usually ready for market before other varieties.

## ASPARAGUS ROOTS

**Culture.** The easiest way to obtain an Asparagus bed, is to set out roots. It takes 3 years to secure one from seed, but with our large, strong roots a bearing bed is obtainable in 2 years.

Asparagus Roots thrive best in soil exceptionally rich and mellow and supplied with a liberal amount of humus. A simple way to start the Asparagus bed is to plow furrows 7 inches deep and 3 to 4 feet apart, according to the richness of the soil, then set the plants, which should be at least one year old, (two-year-old are better) in the trench, allowing 12 to 18 inches between them; spread the roots out well and cover with two inches of soil. After cultivation, gradually fill up the trench, eventually burying the crowns of the plants to a depth of 6 inches.

Cultivate shallow and frequently the first season and as soon as the stalks are dead in the Fall, remove them and cultivate the entire surface of the bed to a depth of 4 inches, then very early in the Spring to a depth of 3 inches and again the latter part of June, working into the soil at this time a liberal supply of decomposed stable manure.

**Barr's Mammoth.** Large green stalks. **Bonvallet's Giant.** White fine quality. **Columbian Mammoth White.** **Conover's Colossal.** Standard green. **Washington Rust Resistant.** **Palmetto.** Mammoth light green. **French Giant Argenteuil.** Superb flavor.

It is best to send Asparagus Roots by express by which method they will arrive in first class condition. We offer large, strong roots, which produce satisfactory results.

Roots are put up in bunches of 50 each.

## Valuable Hints To Gardeners and Farmers

### Quantities Of Vegetable Seeds To Be Sown Per Acre And Smaller Areas.

	1 oz. to 500 plants.....	Per Acre.
Artichoke .....	1 oz. to 50 ft. drill.....	4 to 5 lbs.
Asparagus .....	1 oz. to 50 ft. drill.....	4 to 5 lbs.
Beans, dwarf .....	2 lbs. to 100 ft. drill.....	1 to 1½ bu.
Beans, pole .....	2 lbs. to 100 hills.....	12 qts.
Beets, garden .....	1 oz. to 50 ft. drill.....	5 to 6 lbs.
Broccoli .....	1 oz. to 1,500 plants .....	½ lb.
Brussels Sprouts .....	1 oz. to 1,500 plants .....	½ lb.
Cabbage ....	1 oz. to 1,500 plants .....	½ lb.
Carrot .....	1 oz. to 100 ft. drill.....	4 lbs.
Cauliflower .....	1 oz. to 1,000 plants .....	12 qts.
Celery .....	1 oz. to 3,000 plants .....	1 lb.
Celeriac .....	1 oz. to 3,000 plants .....	1 lb.
Chicory .....	1 oz. to 200 ft. drill .....	.....
Citron .....	4 oz. to 100 hills .....	4 to 5 lbs.
Collards .....	1 oz. to 2,500 plants .....	4 oz.
Corn, Sweet .....	1 lb. to 100 hills.....	12 to 15 lbs.
Corn salad, or Feticus.....	3 oz. to 100 ft. drill.....	.....
Cress or pepper grass.....	½ oz. to 100 ft. drill.....	2 to 3 lbs.
Cucumber .....	1 oz. to 60 hills .....	2 to 3 lbs.
Egg Plant .....	1 oz. to 1,000 plants .....	4 oz.
Endive .....	1 oz. to 100 ft. drill .....	4½ lbs.
Gourd .....	2 oz. to 100 hills .....	3 to 4 lbs.
Kale or Borecole .....	¼ oz. to 150 ft. drill.....	4 oz.
Kohl Rabi .....	¼ oz. to 100 ft. drill.....	2 lbs.
Leek ...	1 oz. to 100 ft. drill.....	4 lbs.

	¾ oz. to 100 ft. drill.....	Per Acre.
Lettuce .....	¾ oz. to 100 ft. drill.....	4 to 5 lbs.
Mangel Wurzel .....	1 oz. to 100 ft. drill.....	5 to 6 lbs.
Melon, Musk .....	1 oz. to 30 hills .....	4 to 5 lbs.
Melon, Water .....	1 oz. to 30 hills .....	4 to 5 lbs.
Mustard .....	1 oz. to 100 ft. drill.....	.....
Okra ...	1 oz. to 400 plants .....	.....
Onions .....	1 oz. to 100 ft. drill .....	5 to 6 lbs.
Onions for sets.....	In drills .....	60 to 75 lbs.
Onion Sets .....	1 qt. to 20 ft. drill.....	12 to 15 bu.
Parsley .....	1 oz. to 150 ft. drill.....	6 lbs.
Parsnip .....	1 oz. to 200 ft. drill.....	5 lbs.
Peas .....	2 lbs. to 100 ft. drill.....	2 to 2½ bu.
Pepper .....	1 oz. to 1,500 plants .....	3 oz.
Potato .....	.....	10 to 12 bu.
Pumpkin .....	¼ lb. to 100 hills.....	4 to 6 lbs.
Radish .....	1 oz. to 100 ft. drill.....	8 to 10 lbs.
Rhubarb .....	1 oz. to 75 ft. drill.....	.....
Salsify, or Vegetable	.....	.....
Oyster .....	1 oz. to 60 ft. drill.....	10 lbs.
Spinach .....	1 oz. to 100 ft. drill.....	12 to 15 lbs.
Squash, running .....	2 oz. to 100 hills .....	3 to 4 lbs.
Squash, bush .....	4 oz. to 100 hills .....	4 to 6 lbs.
Tomato .....	1 oz. to 1,500 plants .....	¼ lb.
Turnip .....	1 oz. to 150 ft. drill .....	1 to 2 lbs.

### Table of Weights (Minnesota Law) and Quantities Of Field Seeds and Grasses Usually Sown Per Acre.

	Lbs. per bu.	Quantity, per Acre
Alfalfa .....	60	15 lbs.
Barley .....	48	2 bu.
Broom corn, in drills.....	57	10 to 12 lbs.
Bromus Inermis.....	14	15 to 20 lbs.
Buckwheat .....	50	½ to 1 bu.
Clover, Alsike .....	60	8 to 10 lbs.
Clover, Medium Red.....	60	12 to 15 lbs.
Clover, Mammoth Red.....	60	8 to 12 lbs.
Clover, Sweet.....	60	15 to 18 lbs.
Clover, White.....	60	5 to 8 lbs.
Corn, in hills.....	56	8 to 10 lbs.
Corn, in drills for soiling or silo.....	56	¼ to ½ bu.
where ears are desired and 1 to 2 bu. for fodder	.....	.....
Cow Peas, broadcast.....	60	1½ to 2 bu.
Flax, broadcast .....	56	25 to 30 lbs.
Grass, Canadian blue (solid seed).....	14	2 bu.
Grass, Kentucky blue (solid seed).....	14	2 bu.
Grass, English or Perennial Rye Grass.....	14	2 bu.
Grass, Italian Rye Grass.....	14	2 bu.
Grass, Meadow Fescue .....	14	2 bu.
Grass, Orchard .....	14	22 lbs.
Grass, Red Top (solid seed).....	14	8 to 12 lbs.
Grass, Red Top (in chaff).....	14	3 bu.

	Lbs. per bu.	Quantity, per Acre
Grass, Lawn Seed, 1 lb. for 350 sq. ft.....	100	100 to 125 lbs.
Grass, Western Rye or Slender Wheat Grass.....	14	15 lbs.
Grass, Meadow Fox Tail.....	14	30 lbs.
Grass, Tall Meadow Oat.....	14	2 to 3 bu.
Kaffir Corn .....	60	3 to 5 lbs.
Millet, broadcast .....	48	25 to 35 lbs.
Oats, broadcast .....	32	2 to 3 bu.
Peas, in drills.....	60	2 to 2½ bu.
Peas, broadcast.....	60	2½ to 3 bu.
Potatoes (cut tubers).....	60	10 to 12 bu.
Rape Dwarf Essex, alone, broadcast.....	50	5 to 6 lbs.
Rape Dwarf Essex, alone, in drills.....	50	4 lbs.
Rape Dwarf Essex, with grain.....	50	1½ lbs.
Rye, broadcast .....	56	1½ to 2 bu.
Sorghum .....	57	50 to 60 lbs.
Soy Beans .....	60	40 lbs.
Speltz, broadcast .....	40	2 bu.
Sudan Grass .....	16	10 to 24 lbs.
Timothy .....	45	10 to 12 lbs.
Turnip, in drills.....	60	1 to 2 lbs.
Turnip, broadcast .....	60	2 to 3 lbs.
Vetches, broadcast .....	60	50 to 60 lbs.
Wheat, broadcast .....	60	1½ bu.

## BEANS

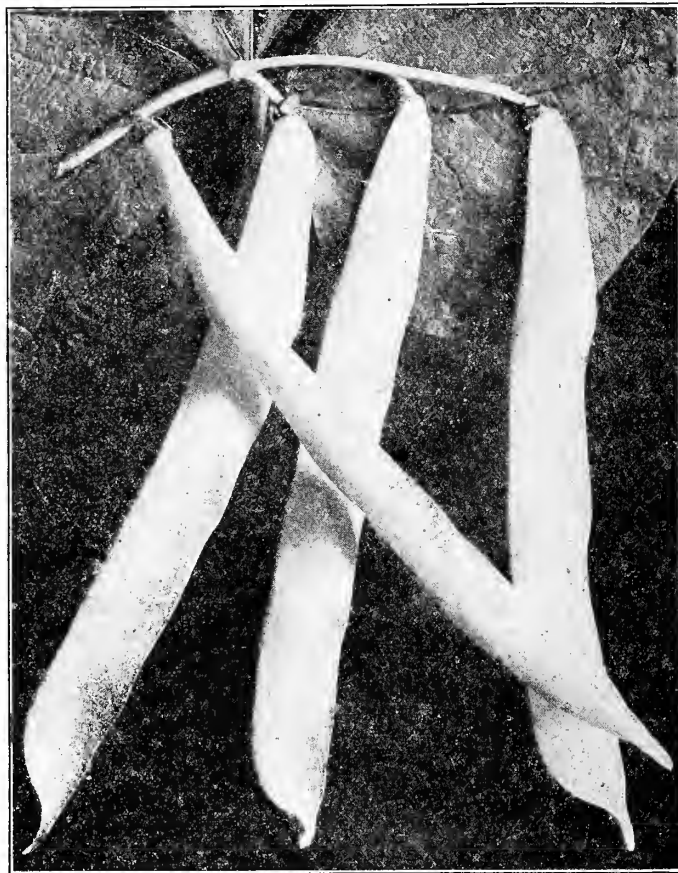
### DWARF WAX VARIETIES

**Culture.** Do not plant them until the ground becomes dry and warm. Bush Beans may be planted about 2 inches deep in drills from 24 to 30 inches apart according to variety and soil. placing the seed 3 inches apart or 4 seeds in hills 24 inches apart each way; 2 lbs. per 100 foot drill. Cultivation should be frequent until the plants begin to bloom, but only when the foliage is dry, for if disturbed when wet the vines will rust.

- 30. Currie's Rust Proof Black Wax.** A very early, beautiful wax Bean, bearing an abundance of crisp, tender, stringless pods, free from rust. It is of excellent quality, delicious flavor. Seed kidney-shaped.
- 35. Davis Kidney Wax.** The most hardy and productive wax Bean. The pods are long, white, straight, crisp and tender. The vine is rustless and very vigorous, bearing the pods in clusters. Seed kidney-shaped and white. For canning this is unexcelled on account of the purity of the pod and Bean.
- 40. Improved Prolific Black Wax.** Vines medium sized, vigorous and hardy. Pods medium length, curved, cylindrical, fleshy, of a clear yellowish white. Remain for some time in condition for use. Seed small, black.
- 42. Round Pod Kidney Wax.** Pods are long, round and stringless. An early, prolific and vigorous variety.
- 44. Pencil Pod Black Wax.** Pods are long, pencil-like; very tender and brittle. In color they are rich, dark yellow.
- 45. Improved Golden Wax.** The plants are hardy and bear an abundance of straight, broad, flat pods. Resist rust to a marked degree. Seed white, with brown or black markings near the eye.
- 55. Wardwell's Kidney Wax.** The strong vines yield abundantly, long, nearly straight, broad, creamy white pods. They are of fine quality and a fine variety for the market gardener. Matures a little later than the Golden Wax. Seed large, kidney-shaped, white with dark markings about the eye.
- 57. Refugee Wax.** A superior Bean for home use. Pods long, round and yellow; are thick meated, perfectly stringless; of excellent flavor.
- 58. Webber Wax.** A flat podded, stringless variety of very good quality. Pods average 6 inches long, broad, and uniformly curved. A very vigorous and prolific sort. Pod, bright yellow; seed yellow, kidney shaped.

### DWARF OR SNAP, GREEN POD VARIETIES

- 60. Bountiful.** The plant is very handsome and of sturdy growth, being practically immune to rust and mildew. It is very hardy, early and prolific and continues in bearing for several weeks. The pods are of immense size, rich green, thick, broad, extra long, solid, meaty, rich, tender and entirely free from string.
- 65. Black Valentine.** Pods are long, round and straight, very attractive in appearance and of good quality.
- 68. Dwarf Horticultural,** or Bush Cranberry. Very productive and compact in growth. Pods medium length, broad, thick, curved and splashed with red. Very desirable as a green shelled Bean, maturing early. Seed, large, oval, plump, splashed with bright red.
- 70. Extra Early Red Valentine.** (Round Pod.) Pods are usually ready to pick in about forty-three days from germination. Vine erect; pods, medium length, curved, cylindrical, with crease in back, very fleshy, crisp and tender; seed long, of medium size.
- 72. Longfellow.** A remarkably early variety, producing long, round, green pods, solid, fleshy, and exceedingly tender. The pods are very brittle and have no strings when broken, unless the pods are quite old. These Beans are extra early, the pods are ready to pick four days in advance of most other green podded bush Beans.
- 75. Long Yellow Six Weeks.** Early, productive and of excellent quality; pods often eight inches long; a popular variety.
- 80. Refugee.** Late or 1000 to 1. Vine large, spreading, exceedingly hardy, very late, and for this reason used for late planting and for pickles. The pods are long, cylindrical, green and of good quality.
- 85. Stringless Green Pod.** The finest green pod, stringless Bean. The earliest and hardiest of all green-podded sorts and produces large, handsome pods, some of which measure fully six inches in length. The plants are very productive, bearing profusely the beautiful green pods, which are perfectly round, straight, broad, tender, brittle, finest flavor, very fleshy and entirely stringless.
- 87. Improved Goddard or Boston Favorite.** A long flat-podded variety, used as a Snap Bean when young and as a Shell Bean when fully developed, being beautifully striped and splashed with bright crimson.
- 88. Giant Stringless Green Pod.** An excellent variety to follow Stringless Green Pod. The plants are of strong growth; pods meaty; brittle and stringless. Plant every two weeks until August 15th for succession.
- 89. Tennessee Green Pod.** Popular in the south. Vigorous, hardy and productive. Pods large, 6 to 7 inches long, flat, dark green and exceptionally fine flavor.



Currie's Rust Proof Black Wax Beans.

### POLE OR RUNNING VARIETIES.

**Culture.** Plant all varieties of Beans after danger of frost is past. Pole Beans require fertile soil. Plant six seeds 2 inches deep in hills around poles 8 feet high, set firmly in the ground. The poles should be set about 3 feet apart each way and the seeds placed in the ground in a circle about 6 inches from the base of the pole. Cultivation same as for Bush Beans.

- 100. Kentucky Wonder.** (Old Homestead.) This climbing variety is very vigorous and productive and bears its pods in large clusters. The pods are green, very long, often being nine or ten inches, nearly round, stringless and very crisp when young, and so fleshy that they are greater in width than breadth. The seed is long, oval, dun-colored. This is one of the very best early Pole Snap Beans for the home garden or market. The supply of seed is limited and purchases should be made early.
- 102. Golden Pod Kentucky Wax.** This vigorous wax podded Pole Bean is very similar to the green podded Kentucky Wonder but the pods are a little broader. They are fleshy and stringless as snaps and are of excellent quality. The pods are very long, handsome light yellow. Its earliness and hardness commend it for northern latitudes.
- 90. Big Profit Pole Bean.** The Big Profit Bean is fully two weeks earlier than any Pole Lima. The Beans are large, thick and luscious, and are borne four or five in a pod. The vines are strong and thrifty, cling tightly to poles and bear abundantly, the pods hanging in bunches or clusters. No Lima Bean can surpass the Big Profit in quality; it has the same rich, buttery flavor, always desired but seldom found. Gardeners will make no mistake in testing this new, extra early Bean.
- 95. Golden Cluster Wax.** The vines are large, vigorous, and hardy; pods six to eight inches long, borne in clusters; color, yellow to white; broad, thick, fleshy and of the very best quality. Seed, oval, dull white in color.
- 98. Horticultural Pole,** or Speckled Cranberry. Vines vigorous with large, light colored leaves. Pods short, broad, green, streaked with bright red. Beans are large, round, splashed and spotted with red. Of very fine quality, either as a green shelled bean or dry. The best lateshell bean for both home and market.
- 105. King of the Garden Lima.** The vines are very vigorous and prolific. Pods are of large size, filled with four or five large Beans of very fine quality. The Beans are easily shelled and of handsome appearance. A favorite with market gardeners.



## BEANS-Pole or Running Continued

**107. Sieva.** A very quick growing variety, maturing early and continues bearing throughout the season. An excellent "Butter Bean" and well worth growing in the North. Also a good winter shell Bean.

**110. Large White Lima.** Vine tall, growing vigorous but slender; leaves medium sized, smooth, light green; pods borne in clusters; are long, broad, very thin, dark green; seed large, flat, greenish-white.

**115. Lazy Wife.** So named on account of the large number of pods it affords, making it easy to obtain a supply. One of the best varieties for snaps of the late green-podded Pole Beans. The pods grow in large clusters, are five to seven inches long, broad, thick, fleshy, and entirely stringless. They have a rich, buttery flavor. The dry Beans, which are white, are fine for Winter use.

**118. Asparagus or Yard Long.** A very interesting variety. The round pods average two feet or more and have the thickness of a lead pencil. The long slender pods are of excellent quality for snapshots.

**120. Scarlet Runner.** Ornamental and useful. The vine is graceful; flowers are of a brilliant scarlet, and the Beans are of an excellent quality, either when shelled or in a dry state.

**122. White Dutch Runner.** Identical with Scarlet Runner Bean except in color of blossom, which is white. Very rapid in growth.

**125. White Creaseback.** A fine, early, green-podded, Pole Bean of rapid growth and very productive. The pods grow in clusters and are from five to six inches in length, perfectly round and deeply creased. They are very fleshy, stringless and of the best quality. The Beans are white and are excellent shelled.

### DWARF OR BUSH LIMA VARIETIES.

No garden is complete without Dwarf Limas. Lima Beans weigh 50 lbs. per bush.

**130. Burpee's.** The bushes are 18 to 20 inches high, of stout, erect growth, branch freely, forming large circular plants from two to three feet in diameter, very prolific, bearing large, beautiful pods well filled with large Beans of the same size and delicious flavor as the pole variety.

**135. Burpee's Improved.** This variety differs from the best strains of Burpee's in having much larger pods, while producing more Beans. Pods and Beans are not only larger in size but thicker. Growth vigorous; pods frequently borne in clusters of five to eight.

**140. Henderson's or Sieva.** Grows erect to a height of 18 to 20 inches and requires no support. Very early and productive. The Beans have the true Lima flavor, rich, buttery and tender. These are two weeks earlier than most Pole Limas.

**145. Fordhook Bush Lima.** An excellent type of Bush Lima, distinct, vigorous, upright growth. The green Beans are tender, juicy, and sweet in flavor when cooked. Pods are borne in clusters well above the ground and contain four or five beans.

### FIELD BEANS

**Cultivation.** Next in importance to pure seed is the selection of the soil in which they are to grow. It is true that Beans thrive on most all soils but better results are gained by the liberal use of fertilizer or planting in light, rich, well drained loam. Beans are extremely sensitive to frost and moisture. It is useless to plant them before all danger of frost is past and the ground is warm. Sow the seed in drills 30 inches apart and four to eight inches apart in the row. They should be frequently cultivated up to the time of blossoming, but this should never be done when the ground or plants are wet with rain or dew, as it will be sure to injure them. If disturbed while in bloom, it will prevent their setting well.

Plant 30 to 35 lbs. per acre, with grain drill.

After the Beans are harvested and threshed, run them through a fanning mill to take out all the broken Beans, pods and stems. Hand picking, taking out all dark or discolored Beans, will add considerably to their value.



For Baked Beans of fine flavor, no variety excels the Improved Tree Bean.



Burpee's Bush Lima Beans

### 150. Improved Tree Bean.

A Wonderful, Productive, White Field Bean.

This bean has made a wonderful record everywhere and those who have grown it admit that it is the most profitable variety to grow for shelled beans as a market crop. It will produce more beans from the amount of ground planted and the quantity used for seed than any other variety of white bean.

It should be planted in rows 28 to 30 inches apart, and from 10 to 15 inches apart in the row, according to the richness of the soil, only one bean in a hill. The plants grow strong and erect about 2 feet high, branching freely, producing great quantities of pods that are well filled with nearly round, medium sized, pure white beans of best quality. The plants grow up right and bear the pods well up from the ground, thus keeping them away from the soil and making them more easily gathered. They ripen very evenly in from 78 to 90 days after planting according to the season, permitting harvesting all at one time, which is very important in bean raising. It is not a garden variety, but belongs to the class of field Beans, the seed of which resembles the well known "Navy" Bean. On account of its snowy whiteness and its uniformly small size, the Improved Tree Bean commands the highest price in all markets. Our seed is carefully selected and is pure stock, which is seldom found in Navy Beans. Mixed stock always sells at from 25 to 50 per cent less than straight stock. A few cents extra expended on the seed means many dollars in the crop.

**155. Brown or Swedish.** There is a large call for these Beans and although we have given them small space, have sold large quantities. It is a fine field variety and the demand is usually good and the price high. The Beans are brown in color, medium size and excellent for cooking.

**160. Choice Navy.** Our stock of this well known variety has been carefully selected and cleaned and will be found far superior to Beans commonly offered as "Navy Stock."

**162. White Tepary Bean.** A whiteshell Bean more prolific than the Navy. This is a native of the arid Southwest and is well adapted to a dry climate; it is quick maturing and will endure drought better than other varieties. It cooks tender and the flavor is delicious. Tepary Beans are immune to common Bean diseases. Plant 12 lbs. per acre.

**165. Red Kidney.** A very fine variety for baking. The favorite Bean for Chili-con-carne.

**170. Boston Yellow Eye.** Almost every one who has lived in New England knows the Boston Yellow Eye Bean. While much larger quantities of white Beans of the Navy type are used than of all other varieties combined, those who know about the Boston Yellow Eye prefer them to any other Bean for cooking, as they possess a richness and flavor known to no other variety. As a shell Bean they have no superior, and for cooking in a dry state, no equal. Any surplus one may grow above requirements may be easily sold at from \$1 to \$2 a bushel above the price of any white Beans, when their superior quality is known. We strongly recommend the planting of the Boston Yellow Eye. Once used, they are always wanted.

## BEET

**Culture.** Sow seed one inch deep in rows 15 to 24 inches apart in fertile, well pulverized soil, using 5 to 6 lbs. seed per acre. An ounce will sow 50 feet of drill.

Cultivation should begin almost before the Beets are up and continue until the plants shade the ground. When a few inches high, thin to six or eight inches apart in the row.



### 175. Northrup, King & Co.'s Sterling.

In this Beet we offer our customers a decided novelty. It is as early as Eclipse, perfectly globe-shaped, with a single tap root, and of the richest color of any of the Beets.

It is a splendid keeper, is not excelled in yielding qualities by any other sort, is exceedingly tender, fine and sweet and is unequalled for table use.

Market gardeners will find our Sterling a very profitable variety to grow, as no other sort approaches it in attractiveness. Exposed on the market by the side of other Beets, it at once catches the eye of the customer and completely dwarfs in appearance all other sorts.



### 180. Northrup, King & Co.'s Market Gardener's.

This variety is one of the best and the ideal Beet for market gardeners and the home garden. It is very symmetrical, with small tap root and but few fibrous roots; color outside is deep blood red; inside, layers of blood red and light red alternately.

When cooked they are a beautiful dark red throughout, fine grained and unsurpassed in quality. It continues to grow until late in the Fall, attaining a large size and making a good selling and eating Beet for Winter. One sowing only is necessary to produce early Beets for market and main crop for winter use.

**185. Crimson Globe.** A very handsome variety of medium size, nearly globe-shaped, free from rootlets, leaving the surface smooth. The flesh is a rich, blood red, of the best quality, sweet and tender, never stringy.

**190. Crosby's Egyptian.** An improvement on Extra Early Egyptian, being as early, but of more desirable shape, color and quality. It is very sweet and tender; a most valuable sort for early market as it is ready before any other Beet of equal quality.

**195. Detroit Dark Red.** Roots globular; smooth with small tops; skin blood red; flesh dark red, zoned with a lighter shade; tender and sweet. This is a splendid variety for canning. The tops are upright in growth; the leaves are dark green shaded with red. See illustration on page 6.

**200. Early Blood Turnip.** Roots turnip-shaped, deep crimson, tender and sweet. This is an excellent market and home garden sort for Summer and Autumn use, a very good cropper.

**202. Early Model.** A splendid variety for table use. It is medium early in maturity, being ready a few days before Crimson Globe. The roots of Early Model are of nice size and grow uniformly perfect, nearly globe-shaped with a slim, smooth tap-root. Leaves are small, colored dark crimson. The color and quality are excellent, flesh being tender, sweet, rich deep crimson and fine flavor. Makes a splendid selling Beet on account of its fine appearance.

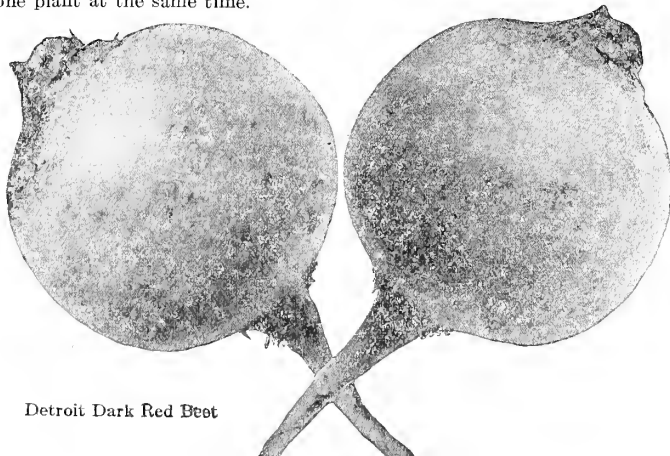
**205. Eclipse.** Makes rapid growth, top small, quality fine, larger than Egyptian, but not as deep a red in color. This is an especially desirable sort for the home garden and bunching. The roots are smooth and round with a small tap root and collar. The flesh is very sweet, crisp and tender, especially when young.

**Fertilizers.** For Beets of quality you must have a mellow, fertile soil. Use our Sterling Fertilizer to supply the necessary plant foods for this crop. See page 96 for description.

**225. Half Long Blood.** This is rapidly becoming a very popular sort and will probably produce more bushels from a given area than any other sort, as it does not occupy so much space in the row as the turnip-shaped varieties.

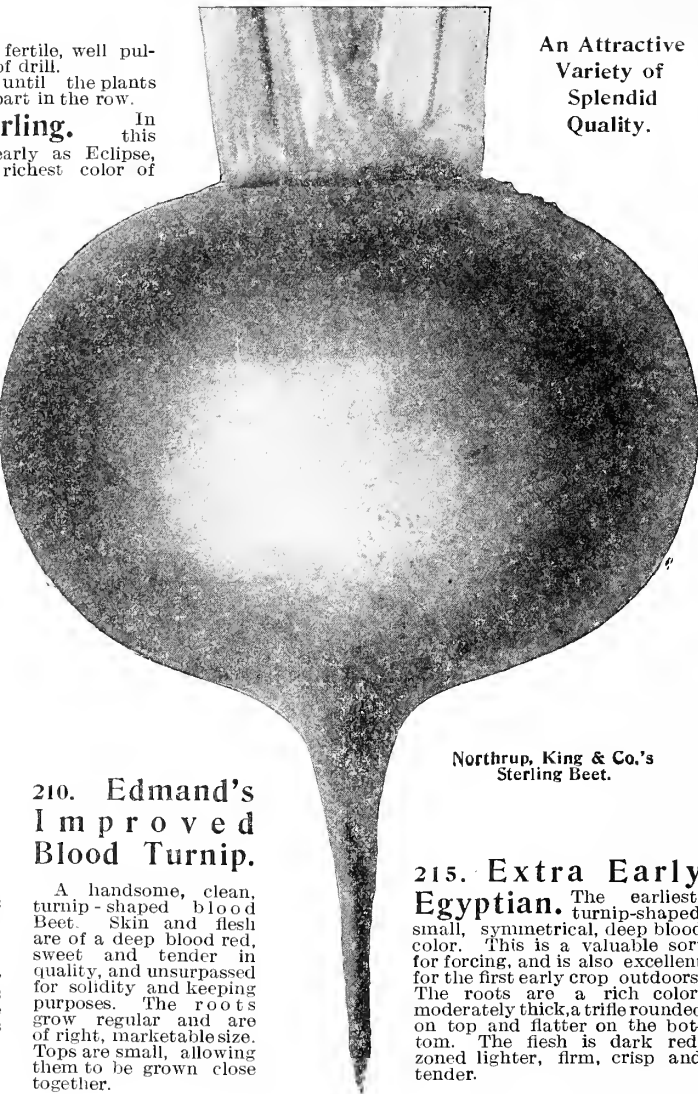
**230. Improved Long Blood.** One of the best and most popular table Beets, especially for autumn and winter use. Our seed has been grown from selected roots, and we can recommend it as a superior stock.

**235. Swiss Chard or Spinach Beet.** This variety does not produce an edible root like the regular garden Beet, but is highly esteemed for the broad, white leaf stalks and midribs which are cooked and served in the same manner as asparagus, making a most delicious vegetable. The leaves are also cooked like spinach and considered equally palatable. Two distinct dishes may thus be grown from one plant at the same time.



Detroit Dark Red Beet

An Attractive  
Variety of  
Splendid  
Quality.



Northrup, King & Co.'s  
Sterling Beet.

### 210. Edmand's Improved Blood Turnip.

A handsome, clean, turnip-shaped blood Beet. Skin and flesh are of a deep blood red, sweet and tender in quality, and unsurpassed for solidity and keeping purposes. The roots grow regular and are of right, marketable size. Tops are small, allowing them to be grown close together.

**215. Extra Early Egyptian.** The earliest, small, symmetrical, deep blood color. This is a valuable sort for forcing, and is also excellent for the first early crop outdoors. The roots are a rich color, moderately thick, a trifle rounded on top and flatter on the bottom. The flesh is dark red, zoned lighter, firm, crisp and tender.

**238. Giant Lucullus Swiss Chard.** The largest and best variety of Swiss Chard. Seed sown early in the Spring will produce plants quickly from which the thick light-colored midribs of the leaves may be cut down to the ground. New growth will quickly succeed it which may in turn be gathered. If the plants are allowed to grow on, an abundance of large curly leaves may be obtained, which make most excellent greens. No garden is complete without Swiss Chard, and the grower will be amply rewarded by giving it at least a small space. It is also splendid for poultry as a green feed or pasture. The birds like it and it grows up quickly.

## BROCCOLI

**245. Snow White.** Culture same as for late cauliflower. Forms heads very much like a cauliflower, but is much hardier, and gives excellent results in cool localities. It is not so valuable as the cauliflower in warm or dry climates, nor of such good quality.

## BRUSSELS SPROUTS

Brussels Sprouts are highly valued in all European countries, but are not generally appreciated here. Thousands and thousands of native born Americans have never tried them and do not know what palatable and nutritious vegetables they are. They should be in every garden.

Culture same as for early or late cabbage, depending on whether an early or late crop is desired, with the exception that the seed should be sown a few days earlier and when the plants are planted out they should be set 15 in. apart in rows 2 ft. apart. 1 oz. will sow 200 ft. of drill.

**240. Improved Dwarf.** The stem, which usually grows from 20 inches to 2 feet in height, is covered with "miniature cabbages" which may be boiled like cabbage or cooked in cream like cauliflower. They are by all means the most delicious and delicately flavored of the cabbage family. On this variety the heads grow very closely and their quality is the finest.

**242. Dalkeith or Perfection.** Plants are of dwarf growth and stems are thickly set with large, solid sprouts. This variety is very hardy and even during quite severe weather, the plants maintain their sprouts; in fact the flavor and quality is much improved by frost.

# SUGAR BEETS

For Sugar Making.

Sugar Beets are now extensively grown in many sections of the country where Sugar Beet factories are located. The large yield per acre and the price secured for the crop make them very valuable. Sugar Beets may also be used for stock feeding as they contain 12 to 15 per cent of sugar in addition to other nutrients. Sugar Beets are ripe and in condition to harvest when the lower leaves begin to take on a yellow tinge and droop. Beet tops make an excellent feed for cows, sheep and other live stock. This is also true of the pulp from the factory. A large Sugar Beet factory in Montana, having an immense output, grows in connection with its Sugar Beets a large acreage of alfalfa. It then buys up thousands of sheep and makes a practice of feeding them for the market on the combination of Beet pulp and alfalfa, and the results are very remunerative.

**282. Victory.** Undoubtedly the most highly developed variety for sugar making. Roots of medium size, white skin with tinge of gray, half long and very uniform in size and shape. Flesh white and very rich in sugar.

**285. Vilmorin-Elite.** This Beet is the result of thirty-five years of methodical and persevering selection. In black soils rich in organic matter, it gives results equal to any other variety. Its average yield may be stated as from 12 to 16 tons an acre.

**290. White American Sugar.** This variety at the present time has probably a wider cultivation than any other Sugar Beet. It may be distinguished from the Vilmorin by its brighter color and its lighter colored leaves, which are beautifully undulating, and scalloped about the edges. While not, as a rule, equal to the Vilmorin in saccharine richness, it is considerably more productive.

## For Stock Feeding.

The ground should be thoroughly prepared and made firm and mellow, same as for Mangels. Seeding and cultivation should be continued in much the same manner except that they should be thinned out 6 to 8 inches in the row. The Giant Feeding Sugar Beets or Half Sugar Mangels are especially valuable for feeding stock as they give a feed of much greater nutritive value than Mangels.

## 275. Giant Feeding Sugar Beet or Half Sugar White Mangel.

This magnificent Sugar Beet while giving nearly as large a yield of easily grown and harvested roots as a crop of Mangels, supplies a food of very much higher nutritive value, the roots for feeding purposes being really more valuable, pound for pound, than those of the very best strains of Sugar Beet, and the yield under equally favorable conditions is more than double. The roots grow partly out of the ground and because of this and their shape the crop can be harvested and stored at less expense than any other root crop. We are certain that every one who plants this variety and grows it with care will be much pleased. Every farmer should try it.

## 277. Royal Giant Sugar Beet or Half Sugar Rose Mangel.

Very similar to Giant Feeding Sugar Beet except in color. The skin is bright rose above ground and white below. Flesh white, sometimes tinged with rose. Roots grow half out of the ground and are thus easily harvested.

**280. Sugar Beet for Stock Feeding.** We can furnish ordinary seed of Sugar Beet which will give a large yield and tonnage.

# MANGEL WURZEL

## For Stock Feeding.

**Culture.** Sow 6 pounds to the acre in May or June, in rows three feet apart, and thin to nine inches in the row. Cultivate frequently with horse tools.

## 250. N. K. & Co.'s Improved Mammoth Long Red.



Farmers and stock raisers of the United States do not appreciate so fully the value of Mangels for feeding cattle, hogs, sheep, etc. as do the farmers of Europe. In France, Great Britain and other European countries, it is the exception rather than the rule where Mangels are not grown on a large scale on every farm. The immense yield which may be secured from an acre, with very little expense either for material or labor, makes the Mangel crop one of the most profitable on the farm. 15 to 20 tons of roots an acre is not an unusual yield; some specimens weigh 20 to 30 lbs. each. Where properly cultivated, seeded and harvested the cost of growing a bushel of our Improved Mammoth Long Red Mangel should not exceed 10c. When fed in combination with grain they are worth almost as much, pound for pound, as the grain. This statement may seem absurd, but experience has proved that Mangels so aid digestion and assimilation, by keeping the animals in a healthy condition, that they increase the feeding value of other feeds consumed, beside the nutrients the roots contain.

Our stock of Improved Mammoth Long Red Mangel is a selection and the roots are very large, uniformly straight and well formed; color, deep red; tops small. Every farmer ought to put in at least an acre of Mangels this coming season, 5 or 10 acres will be much better.



## 255. N. K. & Co.'s Improved Golden Tankard.

We have for years, insisted that this was the best Mangel grown and each season strengthens us in the position we took when it was a comparatively unknown sort. We recommended it unreservedly as the best Mangel for dairy farmers. It combines apparently all the fine points possible to condense into a Mangel. The skin is a deep rich yellow. The flesh is firm and solid and a rich golden yellow in color. On account of its shape enormous crops are grown, and it is easily lifted from the ground.

**256. Crimson Tankard.** In appearance it closely resembles the favorite —Golden Tankard. It is adapted to all soils, is easily lifted from the ground and is a very productive sort.

**258. Danish Sludstrup.** The Danish Government encourages the growing of root crops by offering certificates of merit to growers who select and produce sorts which are of distinctive value. Sludstrup is considered the best of all Mangels having been awarded first class certificate. In color it is reddish-yellow and of a distinct type. It contains the largest per cent of nutriment found in any sort. It is very hardy, grows well above ground and is easily pulled.

**265. Mammoth Golden Giant.** Very large. Remarkably even in shape, of vigorous growth; has a fine neck and a very smooth skin. Flesh white, firm and sweet, much liked by cattle. Easily lifted from the ground, producing enormous crops. Excellent keeper, yields 40 to 60 tons an acre.

**260. Giant Red Eckendorf.** A very popular variety grown in European countries where root crops are grown on a very large scale. It has also proved very satisfactory in the United States whenever it has been tried. The roots are smooth, long and cylindrical in shape, very much like the tankard Mangels. They are very heavy, weighing up to 15 and 20 pounds each. The flesh is firm, crisp and solid, white in color and of high feeding value. This variety is easily harvested, a large proportion growing above ground.

**262. Giant Yellow Eckendorf.** The same as the previous variety except the skin is yellow. Very desirable in all respects.

**270. Yellow Globe.** It has a very small top and few leaves, leaf stalk and blade green; root medium sized, globe-shaped, having a small top and few side roots; skin, deep orange-yellow in color; flesh white and of excellent quality. The root grows almost entirely above ground, making it well adapted to shallow soil and very easy to harvest.



NORTHROP, KING & CO.'S  
IMPROVED MAMMOTH LONG  
RED MANGEL

Sugar Beets and Mangel Wurzels form a very succulent feed for cattle during the winter months.



# CABBAGE

## ARRANGED IN ORDER OF EARLINESS.

**Culture for Early Cabbage.** Seed of the early varieties should be sown  $\frac{3}{4}$  of an inch deep in a greenhouse, hot-bed, or in boxes in the house, about 6 weeks before the plants are needed for planting out.

If, when the second leaves appear, the plants can be transplanted, spacing them 3 inches apart, better and more hardy plants will be obtained.

As soon as the soil can be worked in the Spring the plants should be removed to the open field and set in rows 2 feet apart each way. Cultivate occasionally to keep out weeds and preserve the moisture in the soil until the plants shade the ground. One-half lb. seed will produce plants for one acre.

**Culture for Late Cabbage.** The seed may be sown in rows 1 foot apart or broadcast in the garden, about the middle of May, and the plants set in the field the latter part of June, or it may be planted in hills 30 inches apart, 4 to 5 seeds to the hill, in the field where the cabbages are to grow, thinning to one plant in a hill when the plants are 3 to 4 inches high.

Cultivation must begin as soon as the plants are set in the field, or as soon as seed sown in the field is up and continued as long as it is possible to get through them with a horse cultivator without injury to the plants.

Where the seed is sown in the field, whether it be in rows or in hills, it should be covered with  $\frac{3}{4}$  of an inch of soil and this soil firmed well to insure rapid germination. One-half lb. seed sown in a bed will produce plants for one acre.

### 295. Northrup, King & Co.'s

#### Washington Wakefield Cabbage.

"First in Head, First in Market, First in the Hearts of Gardeners."



We introduced this remarkable Cabbage many years ago. It met with so hearty a reception from every one who grew it that it seemed as though every one who tried it must have written to make known his satisfaction. Every year we receive a great many letters of praise and congratulation regarding the Washington Wakefield Cabbage. No other Cabbage of which we have knowledge has aroused such enthusiasm among Cabbage growers as has our Washington Wakefield. It has the same general characteristics of other Wakefield Cabbages, the heads being conical with a rounded or blunt point. It is, however, far superior to other strains of Wakefield Cabbage, being nearly double the size and of better quality, and at the same time is fully as early. It has few outer leaves, permitting close planting, so that more heads can be grown to the acre than with other sorts.

**325. Early Jersey Wakefield.** Heads are very hard, compact, solid and conical in shape. Few outside leaves. We do not admit that our stock has any superior, except Northrup, King & Co.'s Washington Wakefield Cabbage.

**310. Charleston Wakefield.** Wakefield, but a few days later and half as large again. Not quite as pointed as the Jersey.

**345. Express.** A very early variety forming small oval heads, with round, thick leaves. The head is a little thicker, less pointed and slightly later than the Early Jersey Wakefield. A fine shipping sort.



**340. Early Winnigstadt.** Very early. The leaves are dark green and very tightly folded, making it the hardest of any early Cabbage. This variety seems to suffer less from the Cabbage worm than most other sorts. Heads are regular, conical and keep well both Summer and Winter.

**342. Early York.** A very early variety. Heads, small, heart-shaped, firm and tender. May be planted 15 to 18 inches apart.

**298. Copenhagen Market.** A new early variety, which will be very popular with market gardeners. It is the finest large, round-headed, early Cabbage in cultivation. It is further desirable on account of the remarkable characteristic of maturing the heads all at the same time, enabling the grower to gather his crop with less expense and permitting the cleaning of the land at the first cutting. The heads average about ten pounds each in weight, are hard and solid with small core. The quality is extra fine and sweet. It matures as early as the Wakefields and will yield more to the acre in weight. It is a short stemmed variety, the heads nearly resting on the ground. The leaves are light green, rather small, saucer-shaped and tightly folded, making it possible to set them close together in the field.

**299. Glory of Enkhuizen.** A variety of recent introduction from Holland. It is a valuable sort on account of its earliness, large size and fine keeping quality. The heads are of nice size for market, weighing about 9 to 11 pounds each, globe-shaped and handsome dark green in color. For an early sort, the heads are unusually firm and solid. The leaves are fine ribbed, tender and of excellent quality. The outer leaves set close, permitting planting of more heads to the acre, thus increasing the yield.

**305. Allhead Early.** Earlier than any other large Cabbage. Heads deep, flat, solid, uniform and very tender owing to their rapid growth. An all-the-year-round Cabbage.

**330. Early Spring.** A flat heading sort which has become popular on account of its earliness. The head is very solid and shapely, and as it forms quickly, may be marketed at a very early stage of its growth, enabling the grower to realize fancy prices. The quality is excellent, tender and of fine flavor.

**335. Early Summer.** Deservedly popular with market gardeners throughout the country. It forms large, solid, round, flattened, compact heads of excellent quality, tender and sweet. The heads average over double the size of the Jersey Wakefield, weighing eight to ten pounds each, while it matures only ten or twelve days later. See illustration on page 9.

**385. All Seasons.** A grand variety. We can safely recommend the All Seasons Cabbage as one of the best and surest Cabbages to grow. It is a little later than Early Summer, but very much larger, (about double the size) and for the market gardener one of the most useful, marketable and profitable Cabbages to grow. It is perhaps the safest variety for the amateur to plant as it does well at all seasons and is a very sure cropper. The heads are dark blue in color and being tender and fine keeping are excellent for fall and winter use.

**360. Succession.** About a week later than Early Summer, but much larger, measuring about twelve inches in diameter and weighing about ten to twelve pounds each. The heads are hard and solid and of fine quality. Very fine for either winter or summer use. One of the surest varieties to make a crop.

**365. Surehead.** Heads are large, round, flattened, uniform, very hard, firm and sweet, and average from 10 to 15 lbs. each. Certain to head, a good shipper and a fine keeper.

**347. Fottler's Improved Brunswick.** An ideal second early variety of the drumhead type. Very desirable for the home garden on account of its dwarf compact growth and few outer leaves. Head large, flat, solid and of excellent quality.

**375. Northrup, King & Co.'s Premium Late**

**Flat Dutch.** A slow growing variety, heads large, bluish-green, round, solid, broad and flat on top; an excellent fall and winter variety, and a good keeper. It is a sure header. Our stock has been grown from carefully selected heads, and we consider it superior to any other strain of Flat Dutch Cabbage on the market.



**380. Late Flat Dutch.** (Regular Strain).



Northrup, King & Co.'s Premium Late Flat Dutch Cabbage.

# CABBAGE

**350. Premium Large Drumhead.** Grows a very large, solid head often reaching a weight of twenty to thirty pounds. There is little outer foliage, the leaves all folding in closely about the head. A finewinter variety.

**351. Early Dwarf Flat Dutch.** Second early, short stemmed, compact, with few and short leaves. Heads, large, nearly round, flattened, close, firm and very solid.

**358. Early Dwarf Blood Red.** Earlier than Rock Red, but not quite so large. The heads are hard, keep well and are of excellent quality. In color they are deep blood red and are considered fine for pickling.

**355. Rock Red.** The best, largest and surest heading red Cabbage. Used mostly for pickling. The plant is large, with several spreading leaves. The head is large, round, very solid and of deep red color, averaging from ten to twelve pounds in weight.

**348. Improved American Drumhead Savoy.** The best variety of Savoy or crumpled leaf Cabbage. The plant is vigorous, with short stem, has densely crumpled leaves and when touched by frost is sweet, delicate and delicious. The head is large and very solid.

**401. Autumn King.** Large solid heads, similar to Flat Dutch, with ruffled outer leaves. Needs long growing season.

**349. Celery or Chinese Cabbage.**

**Pe Tsai.** Improved Chinese Cabbage. It is very easily grown and does well in nearly all parts of the country. It should be grown like a late Cabbage, planting in July, as early plantings run quickly to seed. The seed is sown in drills 16 to 20 inches apart and the seedlings trimmed two or three times. The full grown plant somewhat resembles a Cos Lettuce in appearance. It has a mild flavor and may be eaten raw or cooked. Boiled and seasoned with butter, it is especially delectable.



Early Summer Cabbage. See Page 16.

## 390. Northrup, King & Co.'s Holland. Danish Grown Stock.

Most remarkable late Cabbage yet produced, heads hard and solid—fine grained and tender. Entirely distinct in color. Very finest short stemmed type.



This is an indispensable variety. In some important particulars this is the most remarkable Cabbage yet produced. In fact, it well illustrates the truth that "merit will win," in that while it was introduced only a few years ago, it has already become the favorite sort with those who have had the true stock.

This is a very hardy variety and a sure leader, extra solid and firm. The heads are of medium size and average about 8 pounds in weight; they are the heaviest for the size of head ever introduced. They stand shipment better than other late sorts. In quality they have no superior not only for immediate use, but even when kept until Spring, they come out as firm and sound as when put away; in the springtime no Cabbage will outsell them.

The plants are vigorous and hardy; our strain produces short stems and deep heads, as shown in the illustration. The leaves are rather upright in habit, large, thick and smooth with a distinct color.

Holland Cabbage is unsurpassed for shipping to distant points or late Spring use. There is no question as to the value of this Cabbage, the only point is where to obtain the best seed. We offer in limited quantities genuine Danish Grown Stock which was grown especially for us in Denmark. Repeated trials have proved the merit of this strain.

## 315. Danish Ballhead.

### Favorite for Winter Market.

This winter variety is especially desired on account of its great solidity and its keeping qualities. It is now one of the most largely grown varieties for the winter market in this country. The heads weigh more than other sorts of equal size. They are round as a ball, solid, fine grained, with few outside leaves; crisp, tender and sweet, and unsurpassed for boiling, slaw, sauerkraut, etc. This variety has been selected and perfected for over fifty years by the Danish gardeners, who prize it so highly that they grow it almost exclusively for Winter Cabbage and annually export large quantities of it. It grows well on all soils and under most conditions, withstanding hot, dry weather, and does not rot in wet seasons.

## 320. Danish Roundhead.

### Very Vigorous, Splendid Quality.

An earlier, shorter stemmed, improved strain of the Danish Ballhead Cabbage. The heads are hard, very solid and mature about two weeks before the Ballhead, averaging a little larger and heavier.

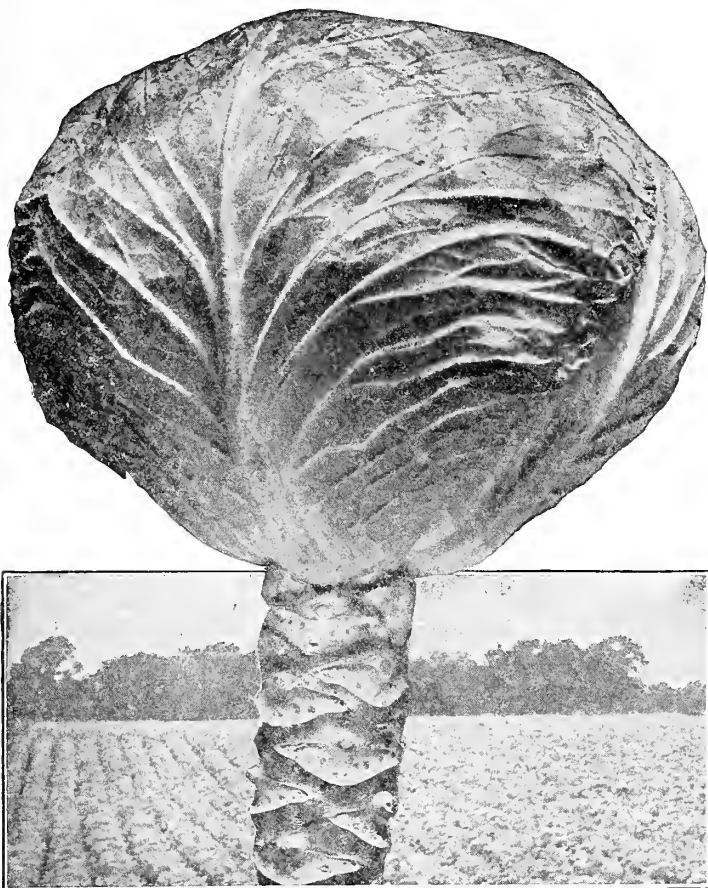
The inner leaves are blanched almost pure white, are of sweet flavor, crisp and tender. It is less liable to blight and shows vigorous growth even in the hot summer.

## 405. Long Keeping.

### Extra Hardy Sort.

As the name indicates, this variety is a good keeper, and it is also superior as a main crop. It will stand drought and frost to a remarkable degree. Heads are uniform, large, firm and solid, and of very superior flavor; color dark green, with few outside leaves. If placed in a dry, cool cellar or pit, they will keep in excellent condition until well along in the following summer.

In many large Cabbage growing localities this variety is grown for Winter storage to the almost total exclusion of all others.



A Field and Specimen Head of Northrup, King & Co.'s Holland Cabbage.

## CARROTS For The GARDEN

**Culture.** For the best results the soil should be well worked to a good depth. For early use sow seed in rows 15 inches apart as early in the Spring as the soil can be worked, sowing about 4 lbs. of seed per acre and cover the same with  $\frac{1}{2}$  inch of soil; but for main crop, sow about corn planting time, using 3 lbs. of seed per acre and the seed should be covered with nearly an inch of soil. One ounce of seed will sow 100 feet of drill. Make the rows two feet apart to allow for horse cultivation. Keep free from weeds and cultivate occasionally until the roots are large enough for table use and if grown for commercial purposes they may be cultivated with profit throughout the season.

When the plants are 3 inches high thin to 3 inches apart in the row.



### 410. Northrup, King & Co.'s Chantenay.

As a table variety it is first-class; in shape it is larger than the Scarlet Horn, and also broader at the shoulder. The flesh is of a beautiful, rich orange color and of the finest quality; it is medium early, with small tops. Roots taper slightly, but are uniformly stump rooted. Gives great satisfaction in both the market and private garden.

**415. Chantenay.** Regular Stock. Same as is ordinarily sold for Chantenay Carrot. This has not been as highly selected as our Market Gardener's stock, but will give good satisfaction.

**420. Early French Forcing.** The earliest variety, largely grown for forcing purposes; globular-shaped root of an orange red color.

**425. Early Scarlet or Short Horn.** One of the most popular varieties grown; color deep orange; flesh fine grained and of agreeable flavor; tops small; has a short, stump shaped root. Grows well in shallow soil; one of the best for early out-door planting and for table use.



Improved  
Long  
Orange



Improved Danvers  
Half Long.



Chantenay.



Half Long  
Scarlet Nantes.



Oxheart Guerande.

### 430. Improved Danvers Half Long.

Our strain of this popular Carrot, while not as "stump rooted" as the Chantenay, has a root which comes to a blunt point, a very beautiful Carrot. A first-class Carrot for all soils; in form midway between the Long Orange and the Short Horn. The root is of a rich, dark orange color; it is very smooth and heavy yielding, twenty to thirty tons per acre not being an unusual crop. Prices for large or small lots.

**435. Improved Long Orange.** A well known standard sort; roots long, thickest near the crown, tapering regularly to a point; color deep orange, suitable for the table and main field crop.

**438. James Intermediate.** A splendid variety, in shape midway between the half long and the long sorts. It is quite broad at the top and tapers to a blunt point. Flesh is rich reddish-orange, tender and sweet. Very desirable as a market variety, on account of the heavy yield, fine shape and appearance and excellent quality.

**440. Half Long Scarlet Nantes, Stump Rooted.** Tops of medium size; roots cylindrical, smooth, bright orange; flesh orange, becoming yellow in center, but with no distinct core. Of the finest quality and one of the most symmetrical and handsome of the medium sized sorts; excellent for the market or home garden.

**445. Oxheart or Guerande.** This fine and very popular Carrot is intermediate as to length between the half-long varieties (such as Danvers) and the Scarlet Horn Carrots, but is much thicker than the latter, being at the top from four to five inches in diameter. Flesh bright orange, fine grained and sweet. It is of very fine quality for table use and equally good for stock. Where other sorts require digging, Oxheart can be easily pulled, making it a particularly desirable sort for soils so stiff and hard that other sorts do not grow well.

## CARROTS For FEEDING STOCK

**450. Northrup, King & Co.'s Celebrated Mastodon Carrot.** If you are a farmer we want to urge upon you just one thing. It is this—try our Mastodon Carrot. There may be room for difference of opinion regarding many varieties of seeds, but there cannot be room for difference of opinion as to which is the best stock Carrot.

Northrup, King & Co.'s Mastodon Carrot is not, properly speaking, a table Carrot, although the flesh is remarkably firm and sweet. It is not a Carrot for the market gardener, but it is emphatically the Carrot for the farmer, and once used, nothing else will take its place.

Northrup, King & Co.'s Mastodon Carrot is the heaviest cropping Carrot grown, yielding more tons to the acre than any other sort. The flesh is white, crisp and solid and very sweet in flavor. It is a vast improvement on the white and green Belgian sorts which have been favorites in the past, as it is not only much more productive but vastly easier to handle. The roots are short and very heavy at the shoulder, rendering them easily harvested. An important feature, also, is that they do not easily break in pulling or sorting. Too much can scarcely be said of their size and great productiveness. The roots frequently measure 15 to 20 inches in circumference, and 18 to 40 tons to the acre is not an extravagant statement as to yield.

**455. Northrup, King & Co.'s Victoria Carrot.** The Victoria is a very large and a very rich stock Carrot. There can be only one best stock Carrot, and we think our Mastodon is that Carrot, yet there are many who prefer a yellow Carrot. We can say to such that there is no yellow Carrot which can approach the Victoria in size, in yield and in feeding qualities. It is the largest and best form of Orange or Yellow Carrot known. The roots are remarkably fine, very symmetrical and of excellent quality, possessing high feeding properties. It is a heavy cropper on all soils, but is especially adapted for rich, strong land. It grows nearly half as much weight again an acre as the ordinary varieties, and as the roots grow more above the ground it is much easier to gather the crop. This grand variety is sure to suit every one who grows it.



## 484. Witloof=Chicory or French Endive

Remarkable for the width of its leaves and the great size of its ribs and stalks. The roots grown in trenches produce the well known vegetable and salad called in Belgium "Witloof" and in Paris "Endive." Used as a winter salad. Delicious when served with French dressing and eaten like Cos Lettuce. The seed should be sown in the open ground not later than June, in drills twelve to eighteen inches apart, and the seedlings should be thinned out to stand three inches apart. The plants form long, parsnip-shaped roots which are lifted in the fall, trimmed of leaves, and stored in soil in a cool place until wanted for forcing. The roots should be planted upright about one and a half to two inches apart in a trench sixteen to eighteen inches deep. This will bring the neck of the root to within nine inches of the level of the trench, which should be filled with light soil. If a quicker growth is desired, a mulch of fresh manure about two feet deep may be used. The roots may also be forced in boxes in a warm cellar, in which case they should be set in a fine soil two inches apart and with the crowns two inches below the surface. To exclude all light, the box should be covered with another of the same size, and if water is required it should be slightly heated. It requires about one month to force the roots. The heads are then cut off with a small portion of the neck of the root attached.

## CAULIFLOWER

**Culture.** For early use, seed should be sown  $\frac{3}{4}$  of an inch deep in a greenhouse, hot-bed or in boxes in the house, about 6 weeks before the plants are needed for planting out.

If, when the second leaves appear, the plants can be transplanted, spacing them 3 inches apart, better and more hardy plants will be obtained.

As soon as the soil can be worked in the Spring the plants should be removed to the open field and set in rows 2 feet apart each way.

Cultivate occasionally to keep out weeds and preserve the moisture in the soil until the plants shade the ground.

For late use sow seed in beds about May 10th and when the plants are large enough remove to the garden, setting them from 2 to 2½ feet each way.

Cultivation must begin as soon as the plants are set in the field, and continued as long as it is possible to get through them with a horse cultivator without doing injury to the plants.

As soon as the heads begin to form, tie the leaves together over the head to keep out the light; by this process nice white heads are obtained. One ounce of seed will produce about 1000 plants.

**460. Northrup, King & Co.'s Model** In competition with all other strains the Model Cauliflower has won the approval of critical gardeners, being the earliest and best sort grown. It is suitable not only for early use, but is superior for late planting. The heads are hard and solid and do not spread as do some of the inferior sorts. No other equals it in purity of color, being clear snow white. It is equally desirable for family use and for the market garden. The heads are large—from 9 to 12 inches in diameter, and weigh from 4 to 8 pounds. On account of its close growing, compact habit many more plants may be grown on a given area than of the late spreading sorts.



Northrup, King & Co.'s Model Cauliflower.

**465. Northrup, King & Co.'s Drought Resisting.** Especially adapted to dry locations, where it will produce large, solid heads when all other sorts would fail. To secure the best heads the soil must be rich and thoroughly cultivated.

**470. Snowball.** Forms snow white heads six to ten inches in diameter, of good quality. Its close growing habit permits more heads to a given area than the later maturing sorts. Excellent both for early and late planting. Grown from stock seed obtained from originators. Equal to any strain of "Snowball" on the market.

**475. Extra Early Dwarf Forcing.** The finest strain dwarf and compact, forming good sized heads, very fine stock.

**482. Extra Early Paris.** A popular and early heading variety. Heads are solid and very uniform but not considered as sure heading as the Forcing type.

## CRESS

**Culture.** Sow seed thickly in shallow drills 12 inches apart, in the Spring, and for a succession every two weeks.

One ounce of seed required for 200 feet of drill.

**Water Cress.** Sow the seed in cool, moist soil in the early Spring or if a shallow slow running stream or ditch is near, the seed may be sown within the same near the bank. When sown in a location of this kind it grows luxuriantly for years.

**485. Fine Curled (Pepper Grass).** Quick growing; leaves finely cut like parsley; growth dwarf and compact; crisp and pungent.

**490. Water Cress.** Highly esteemed as a salad; also used as a garnish for meats.

## 495. CHIVES

Chives are perfectly hardy perennial plants of the onion type. They are grown for the small leaves which come up very early in the Spring and give a mild onion flavor to food in which they are placed. The tops may be cut off as close to the ground as desired.

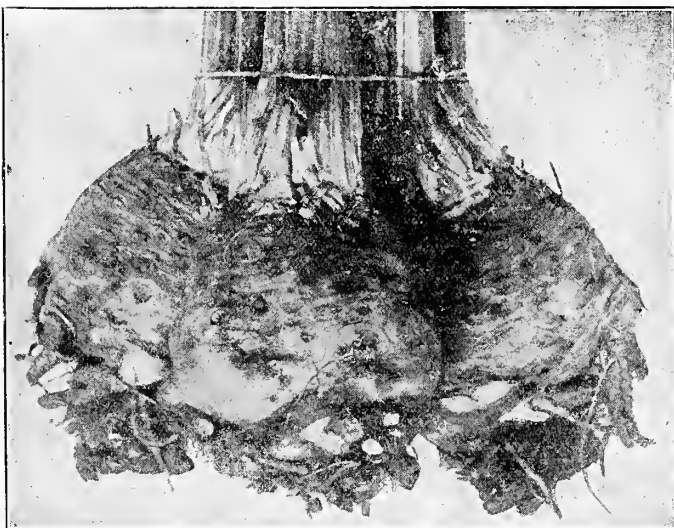
## CELERIAC

(Turnip Rooted Celery)

**Culture.** Treat seeds and plants the same as recommended for celery with the exception that it is customary to set the Celeriac plants in rows 1 foot apart. The roots are preserved for use in Winter by storing in moist sand in the cellar.

One ounce seed for 1,000 plants.

**500. Large Smooth.** Large, smooth, excellent flavor.



Celeriac or Turnip Rooted Celery.

## CELERY

**Culture.** Sow seed in the garden, as early in the Spring as the soil can be worked. Cover the seed lightly and firm well.

Keep the bed moist to insure quick germination and growth.

Before setting out the plants shear off the top leaves, which makes stocky plants with a tendency to spread out.

When ready, set plants 6 to 8 inches apart in rows 3 to 4 feet apart, according to variety and soil. When the roots of the Celery plants are very long it is advisable to trim them off just before setting to about 3 inches.

Cultivate well until the middle of August, then, work up the soil between the rows around plants from time to time until plants are covered and they will soon be ready for use.

When desired for winter use it should not be bleached in the field, but enough soil should be drawn about it to secure an erect habit of growth and it should be transferred to the cellar prior to settled cold weather.

One ounce of seed will produce about 3,000 plants.

### 505. Northrup, King & Co.'s Golden Self Blanching.



This splendid variety is without doubt the most popular Celery grown. It is a self-blanching sort, for with a little banking or covering, even the outer ribs assume a beautiful golden yellow, while the heart or vine stalks are deliciously tender, brittle and sweet. This variety is being very extensively grown both for market and private use, not only on account of its ease of culture, but for its superior quality. It is not quite so early as the White Plume, but is of heavier and more compact growth, the stalks being thick, crisp and brittle. The hearts are large and solid, blanching a beautiful waxy yellow. It is tender and sweet and free from stringiness; flavor rich.

Our Private Stock seed is procured from a noted Celery grower in France. The American grown seed is often as good as any produced in France, but we have sometimes been disappointed in the quality, while the seed produced in France has never failed us. For that reason we offer both strains.

### 510. Golden Self Blanching, American Grown.

This is the same variety as our Private Stock seed but is American grown. It gives good results as a rule but we do not recommend it so highly as our French grown seed.

### 515. Northrup, King & Co.'s Kalamazoo.



We consider our Kalamazoo absolutely and without exception the very best Celery grown. It is late, it is not self-blanching, but it is worth many times over, all the extra trouble and labor involved in growing it. Kalamazoo Celery, when properly grown, is extremely large, solid and crisp, and possesses a rich sweet and "nutty" flavor unequalled by any Celery we have ever seen. It is a fine keeper.

### 520. White Plume.

The earliest Celery. This is a well known variety. Popular on account of its earliness and the ease of its culture.

### 530. Golden Hearted Dwarf.

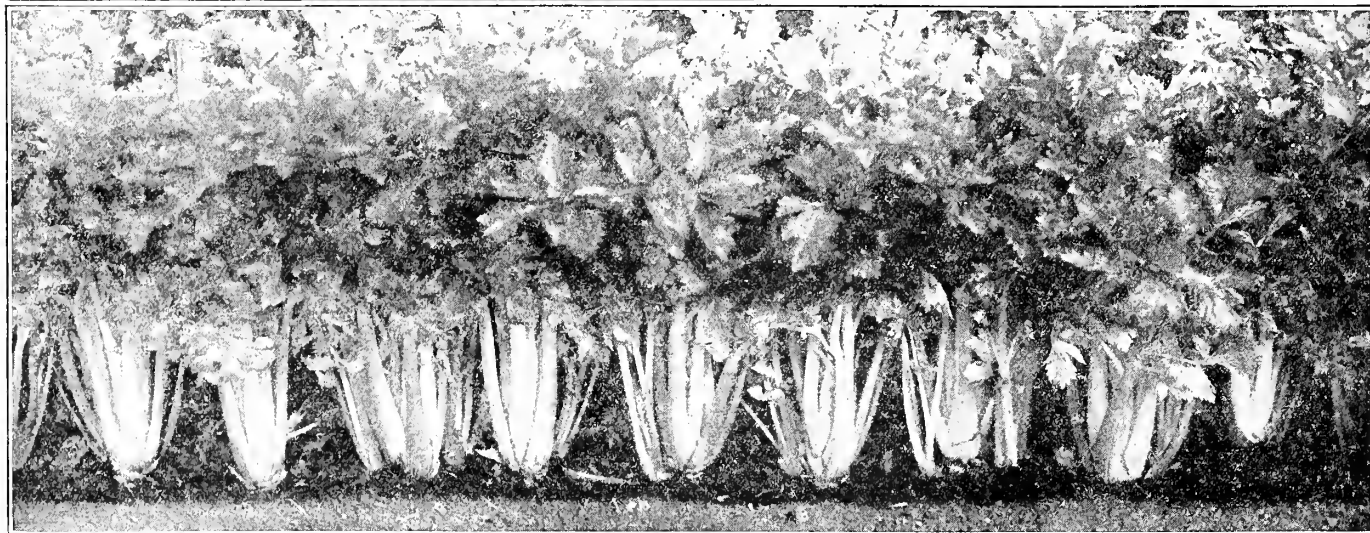
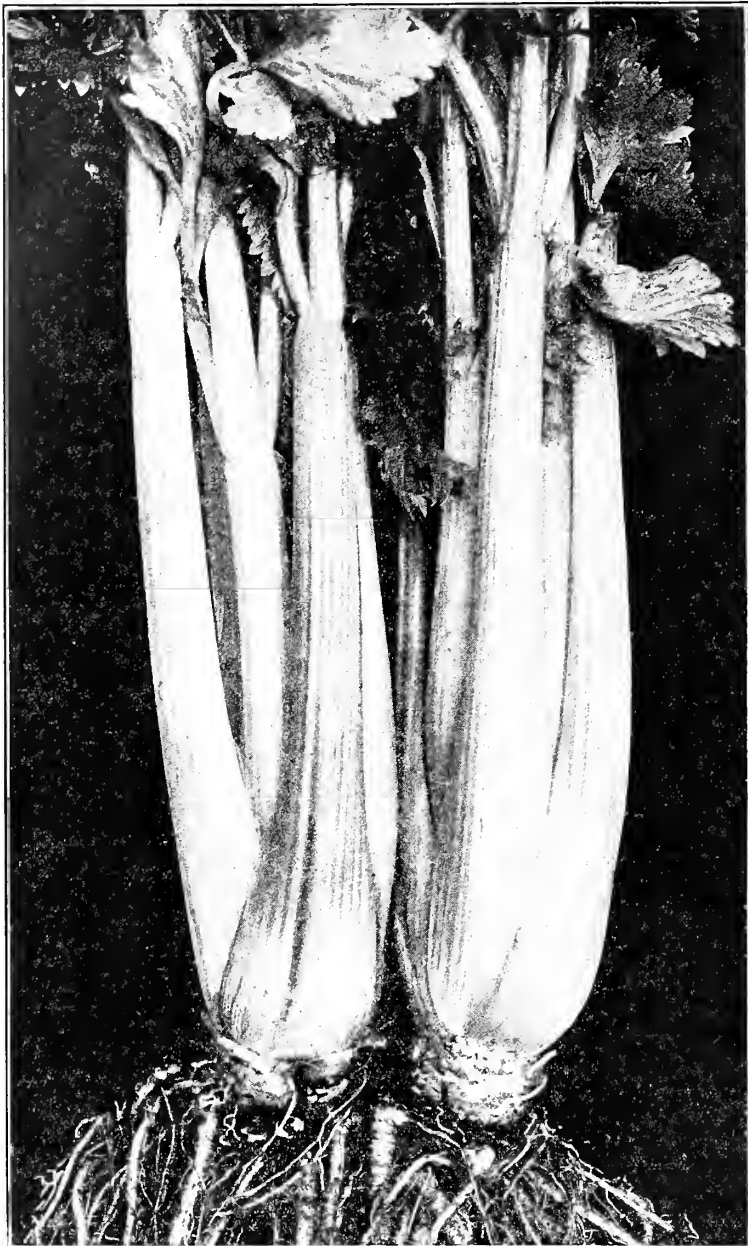
A favorite main crop variety. When blanched the stalks are of a wavy yellow color, solid and crisp. A splendid keeper.

### 535. Giant Pascal.

One of the most popular sorts for growth; the stalks are exceptionally thick with very heavy hearts which, when blanched, are of a beautiful creamy yellow color. Very brittle, superb flavor.

### 537. Winter Queen.

A very fine variety for Winter storage. Robust, stocky growth requiring but little labor in blanching. The heart stalks are heavy broad and solid, but crisp and tender, blanching to a rich, creamy white.



Northrup, King & Co.'s Golden Self Blanching Celery.

# SWEET CORN

Market gardeners and private planters should keep in mind the important fact that Sweet Corn produced in the North is earlier and more hardy than the same varieties grown farther south. We do not think it too much to claim that nearly all of our varieties of Sweet Corn are easily a week to ten days earlier than the same varieties produced elsewhere. This means a great deal to the gardener who wishes to have his Corn first in market, for it is then that the best prices are obtained. It is equally as important also to the private planter growing Corn for his own table, as it lengthens the season for all varieties.

Our Sweet Corn is thoroughly tested before it leaves our hands.

## The Two Best Early Varieties of Sweet Corn

### 545. Golden Bantam.

Should be grown in every garden.

Everyone likes to eat Golden Bantam Corn. In fact many people will not take any other when Golden Bantam is obtainable.

**Quality.** The flavor is deliciously distinct, superior to that of any other corn. Of all varieties the name "Sugar Corn" seems to fit this best as it is so unusually sweet. The decided preference shown for it in market, restaurant and home has enabled many growers to sell Golden Bantam at a premium. It is so unique in appearance that all who have ever enjoyed the golden yellow ears recognize them instantly. One cannot forget such splendid quality.

**Habit of Growth.** Another good feature of this Corn is the character of its growth. The stalks are usually 4 to 5 feet high, with short foliage. Being small they can stand very close together and thus produce a large crop on a very small area. The ears average more than one to the stalk; they are 6 to 7 inches long, just the right size to serve at the table. The kernels are tender, very wide and of good depth, while the cob is small. There are 8 to 12 rows of kernels on each ear. Golden Bantam ears are enclosed in a heavy husk, protecting them against insects and disease.

**For the Home Garden.** The best way to get good Sweet Corn is to raise it yourself. Then you can be sure that it is fresh and picked at just the right time. This is of the greatest importance since if it is picked too early it is watery and tasteless, if too late the hulls become tough. However, Golden Bantam remains an unusually long time in condition for eating.

No Sweet Corn is better adapted to the home garden than Golden Bantam since its slender growth requires little space and it matures in such a short season that some other crop can be raised on the same ground either before the latest planting or after removing the earliest.

**Earliness.** In season Golden Bantam is about six days earlier than Peep o' Day, but on account of the superior quality of the yellow Corn many start it indoors in April and transplant it later to the garden. By this method Golden Bantam is ready for use in early Summer. It may be sown out-doors from the end of May to July tenth. For succession, plant at ten day intervals, and thus produce the finest Sweet Corn from early Summer until frost.

**Hardiness.** Especially adapted for Northern planting, on account of its hardiness and ability to withstand unfavorable weather. Not only is it adapted for planting in the extreme North, but it is meeting with unusual success in the middle and southern states. It may be planted late in the Summer for early fall use. In high altitudes where many other varieties will not mature on account of the cold nights or early frost, this variety proves successful.

**Northrup, King & Co.'s Strain.** Our Golden Bantam Sweet Corn is all grown in Minnesota under the personal supervision of our experts. Here, in the North, the growing season is short so Corn must mature earlier than it does farther south. Consequently Northrup, King & Co.'s Strain of Golden Bantam is the earliest known. It is the best to plant in high altitudes or northern regions—wherever the growing season is short. Earliness counts in the middle states, too, where a few days often makes a big difference in the market gardener's profit, so we confidently recommend our strain for planting there also. We carefully select all ears before shelling and our stocks are the very finest obtainable.

That this strain is popular is proved by the fact that we usually sell enough Golden Bantam to seed 40,000 acres, shipping it to all parts of the country. New England alone uses a carload—New England, where most of our Sweet Corns originated. There if anywhere they know what good Sweet Corn is and so they come to the Northwest for their seed, convinced that here only can they secure the earliest and best strain.

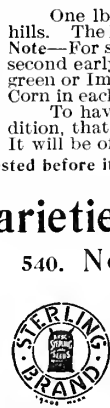
**Satisfaction.** We have yet to hear of a grower who has planted our Peep o' Day or Golden Bantam Sweet Corns and was not well pleased with them when weather and climate were favorable. From all points come letters from pleased customers.

**Culture.** The stalks, being short and small and having few leaves, may stand very close together. The seed may be planted either in hills or in rows. If the former, plant six or seven kernels in a hill, thinning out well so as to have four plants in each hill. If in rows and not in hills, drop the seed from six to eight inches apart, according to the soil, and if planted early cover about one inch deep. Seed planted later should be planted deeper, according to the amount of moisture in the soil. The rows may be just far enough apart to admit of cultivation. Twelve to fifteen lbs. of seed will plant an acre. Prepare the land thoroughly, making it deep and mellow. For early Corn, plant just as soon as danger of frost is over, bearing in mind that it is sometimes well to take a risk in early planting as early Corn is always in greatest demand.

It should be borne in mind that Minnesota grown Sweet Corn is at least two weeks earlier and much harder than seed produced in any other section.

### Do Not Plant Sweet Corn Too Deep

Plant 1½ inches deep. Sweet Corn will rot during cold, wet weather at a greater depth, especially if planted too early. May 20th to June 10th is early enough for the Northwest.



One lb. of seed will plant about 100 hills; 12 to 15 lbs., an acre in hills. The Minnesota State Law designates 48 lbs. as a bu. of Sweet Corn. Note—For succession, plant Golden Bantam for earliest; Peep o' Day for second early; Portland for medium; Northrup, King & Co.'s Zig Zag Evergreen or Improved Black Mexican for late, and secure the very best Sweet Corn in each class.

To have the finest Sweet Corn it must be picked in just the right condition, that is, when the skin of the grain breaks at the slightest puncture. It will be of inferior quality if it is either a few days too old or too young.

### 540. Northrup, King & Co.'s Peep o' Day.

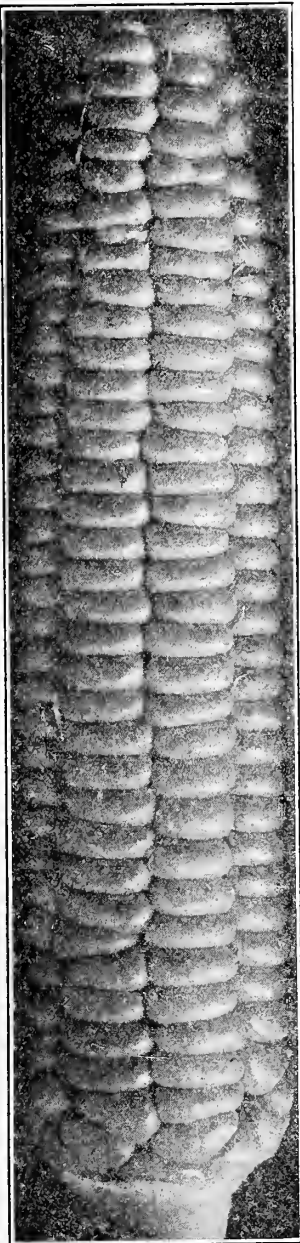


In Peep o' Day Sweet Corn we offer a variety which we believe to be earlier than any other Sweet Corn grown except Golden Bantam. There is no product of the garden which is so eagerly awaited as the first Sweet Corn of the season. Not the tasteless, discouraged, premature Corn shipped from long distances, of little value when picked and unfit for human food when it arrives, but the real, tender, juicy Sweet Corn, ready for use before the Summer has really commenced. Such a Sweet Corn is Northrup, King & Co.'s Peep o' Day. Not only is it early, but it is sweet and delicate in flavor, being excelled in this respect by no other early Sweet Corn except Golden Bantam. Kernels are pure pearly white.

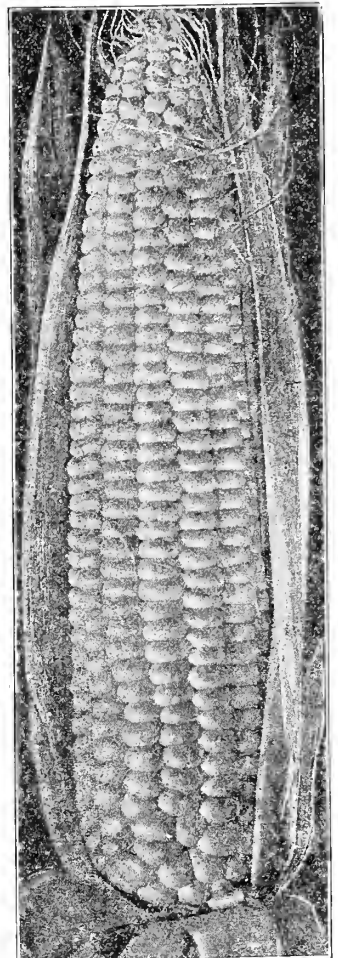
On account of its extreme earliness Peep o' Day Sweet Corn is especially adapted for planting in northern latitudes and in high altitudes where other varieties fail entirely. Peep o' Day produces a large number of "suckers" which, unlike other varieties, produce full sized, well formed ears. It is not unusual to find a single plant bearing from four to five ears. The yield per acre is therefore very large.

The stalks grow 3½ to 4½ feet in height, and having light foliage may stand very close together. The ears are small, 5 to 6 inches in length. The kernels, though not large are of good substance and borne 8 to 12 rows to the ear.

Sweet Corn is one of the most satisfactory vegetables to plant for increasing the food supply. Cultivation is simple and whatever is raised in excess of immediate requirements may be canned for use during the winter months. It is a thrifty practice to raise enough Sweet Corn each summer to provide a liberal supply for the entire year.



Golden Bantam Sweet Corn.



Northrup, King & Co.'s Peep o' Day Sweet Corn.



## SWEET CORN

**Culture.** Sow upon arrival of warm weather in drills 2 inches deep, 3 to 4 feet apart, according to variety, placing the seeds 8 inches apart in drills or 6 seeds in hills 3 to 4 feet apart each way. Cultivate to keep free from weeds and when Corn is well started thin to 4 stalks to the hill.

Plant early varieties in succession, or sow early, second early and late sorts at one time, which will continue the season for several weeks. One bushel of seed will plant from  $3\frac{1}{2}$  to 4 acres.

The Minnesota State Law designates 48 lbs. as a bushel of Sweet Corn.

### EXTRA EARLY VARIETIES

**548. Early Adams.** This is not a Sweet or Sugar Corn, but is especially good in northern sections for an extra early table Corn where other varieties do not mature. When ready for table the young grain is tender, milky, and quite sweet. Very hardy, maturing in sixty days from time of planting. Supplies fodder in the hot, dry summer months.

**550. Early Minnesota.** A standard early sort of excellent quality, especially desirable where seasons are short. The ears bear 8 to 10 rows of large, white grains. This variety is popular on account of its great productiveness. Excellent for market, home and canning use.

**555. Early Red Cory.** Equally as early as White Cory. Corn is white but the cobs are red. Very sweet and tender.

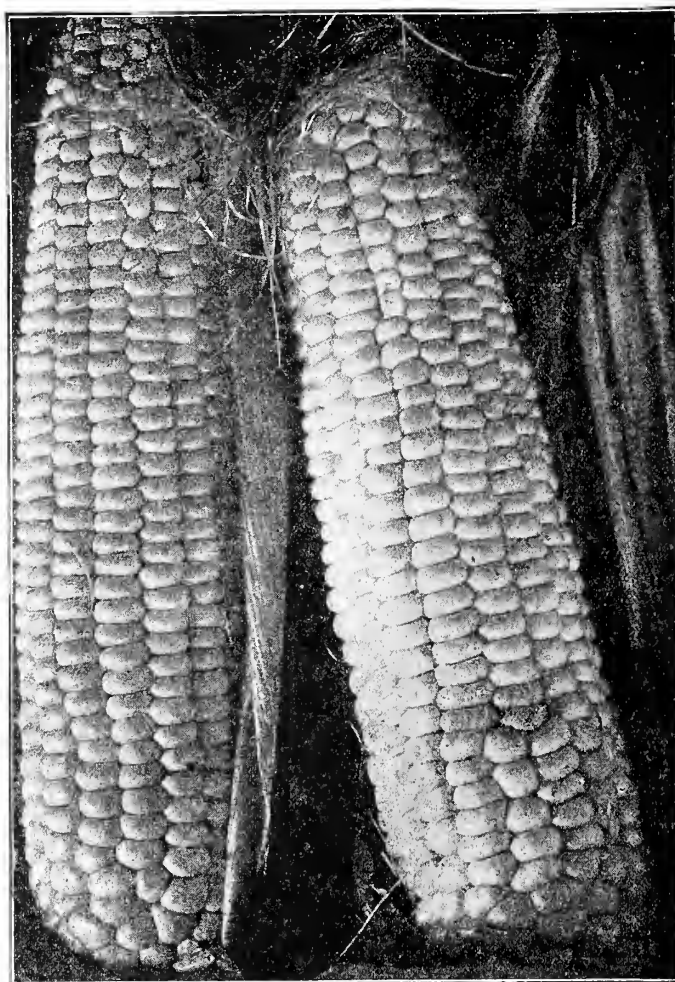
**560. Extra Early White Cory.** One of the earliest varieties, well and favorably known in all parts of the country. It succeeds well where the seasons are short, and can be recommended for general planting. Ears six inches long, with eight rows of broad grains.

**562. Extra Early White Mexican.** As sweet and delicious as Black Mexican and as early as White Cory. Stalks  $4\frac{1}{2}$  ft. high. Ears eight inches long, usually eight rowed. Superior in quality to any early variety of equal size.

**564. Howling Mob.** This variety originated at Toledo, Ohio and its queer but appropriate name has reference to the loud and clamorous demand for the Corn when brought to market. The stalks are usually about 5 feet in height and produce early in the season two splendid ears to a stalk. The ears are 7 to 9 inches in length and are well covered with a heavy husk, affording protection from the green worms which so often are destructive to early varieties. There are 12 to 24 rows of good sized white kernels.

**575. Mammoth White Cory.** Similar to Early Cory, quite as early. The kernels, however, are somewhat broader and the ears average somewhat larger in size.

**578. Pocahontas.** An exceptionally early variety. The growth is very uniform and the ears are evenly and compactly filled with broad, white kernels which are tender, sweet and of very fine quality for so early a variety.



Early Minnesota Sweet Corn.

### SECOND EARLY VARIETIES.



#### 585. Northrup, King & Co.'s Portland.

This variety is not quite so early as the Cory, but it will pay Sweet Corn growers to wait a few days for it. Private families pronounce it unsurpassed; market gardeners capture trade with it.

**587. Golden Evergreen.** The product of a cross between Golden Bantam and Stowell's Evergreen, with the quality of the Bantam and the tender skin of the Evergreen. Considered by many the sweetest of all.

**588. Early Champion.** One of the earliest large Sweet Corns. Ears are medium with 12 uniform rows. Preferred by many for its tender quality.

**590. Early Crosby.** A standard sort deservedly prized by thousands of planters as one of the sweetest of varieties. The kernels are very closely set. This strain is superior to any variety of Sweet Corn grown for canning purposes in the state of Minnesota.

**592. Early Evergreen.** This fine variety is ten to twelve days earlier than Stowell's Evergreen and yields large, handsome, ten or twelve-rowed ears. An excellent variety to follow Mammoth White Cory.

**595. Perry's Hybrid.** A well known and favorite sort, valued on account of its hardness, productiveness and size of ears.

**600. White Evergreen.** This variety is a little earlier than Stowell's and is pure white in color. The stalks are of strong, vigorous growth from six to seven feet high. The ears are very large and well filled to the tip with long, slender, pure white grains of the finest flavor.

### LATE VARIETIES.



#### 605. Northrup, King & Co.'s Zig Zag Evergreen.

The very best of all late white varieties. We have statements from experiment stations and from canning factories, as well as from hundreds of private planters, testifying to its superior sweetness and productiveness, incomparable whiteness when cooked and fine appearance on the table. As introducers of this variety, we assert, without fear of contradiction, that it is best of all the late white sorts.

**610. Stowell's Evergreen.** The best known and most largely planted of all the varieties. We are free to confess that Northrup, King & Co.'s Zig Zag Evergreen possesses all of the good qualities which have made the Stowell's strain so popular. At the same time, the Stowell's Evergreen is hard to beat and for a long time to come many will have it in preference to any other sort. This Corn is distinguished by the large ear, the long, deep kernels, its rich, sugary flavor and its long-keeping qualities. Our seed has been selected for its sweetness, productiveness and large size.

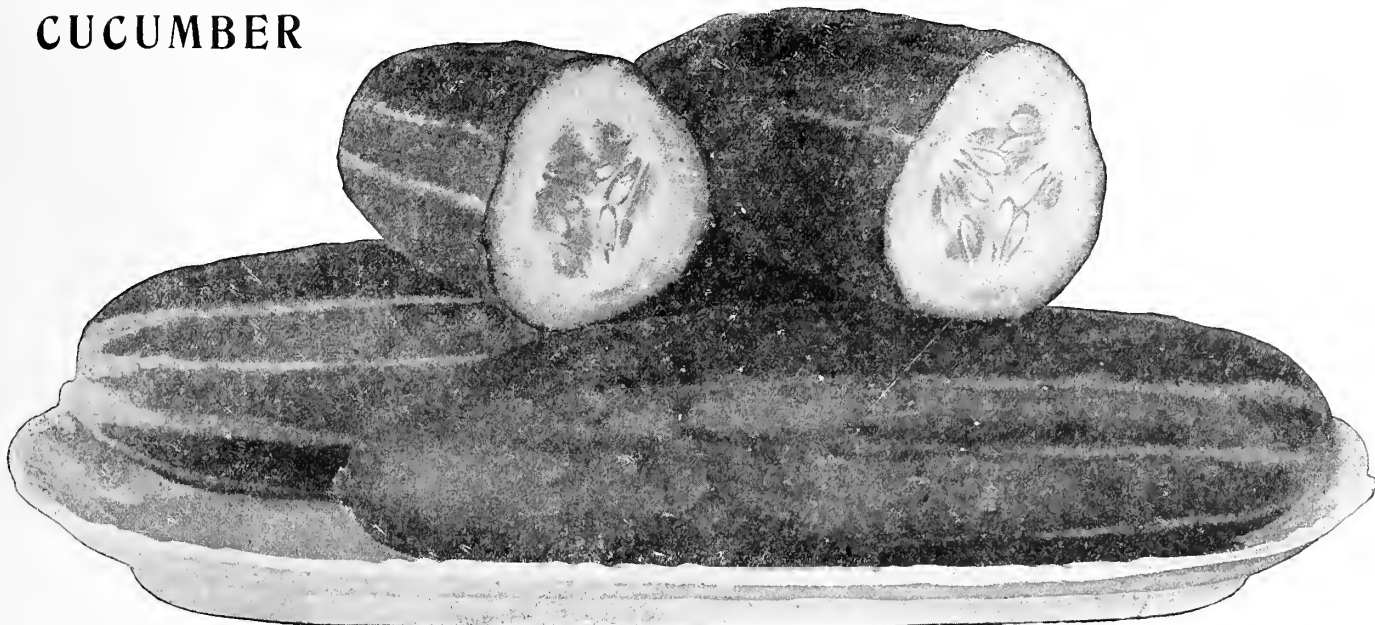
**615. Country Gentleman.** This variety is often called the "shoe peg" Corn, owing to the arrangement of the crowded kernels, which are long and very sweet.

Our seed of this variety has been carefully selected and is true to name. It is nearly as sweet as Peep o' Day and is far ahead in flavor of any of the late varieties. It remains tender and fit for use longer than most sorts, as the ear is enclosed in a thick husk which keeps it "in the milk." The ears average nine inches in length and are borne from two to five and sometimes six on each stalk. The cob is small and very closely packed from tip to butt with slender, pure white kernels of the finest quality. If you try this variety you will like it.

**620. Improved Black Mexican.** This variety has for a number of years had the reputation of being the sweetest of all Sweet Corn. When cooked, the ear is white with a bluish tinge towards the base of the kernel. Every year we have a number of inquiries from those who have known this Corn, but who have forgotten its name and remember it only as the "black Corn that was so very sweet." We offer a highly superior strain of this very desirable and much sought after sort. It must still rank with us as a late variety, but as it now matures nicely in Minnesota, it may be safely grown in almost any part of the United States.

**622. Late Mammoth.** Rather late, producing the largest ears of any variety; often 14 inches in length and filled with large, broad, white kernels which are sweet, tender and delicious. Usually there are 16 to 18 rows to the ear. The stalks are very large.

## CUCUMBER



Northrup, King &amp; Co.'s Sterling Cucumber.

**Culture.** Plant the seed  $\frac{3}{4}$  of an inch deep in hills 4 to 6 feet apart each way, according to the variety, about corn planting time, allowing 10 seeds to the hill. As soon as the plants commence to run, remove all but 3 or 4 of the most promising ones in each hill. Cultivate frequently as long as the vines will permit. The seed may also be started in old berry boxes by placing them in the hot-bed. When the weather is suitable—settled and warm—remove the box as the plants are placed in the garden. The fruit should be gathered as soon as large enough for use; if it is not, the productiveness of the vines will be permanently injured. One ounce required for 60 hills; two to three pounds per acre.

**625. Northrup, King & Co.'s Sterling.**

Will be found to possess the following points of superiority:

First. It is the earliest white spine Cucumber, suitable for table, market or shipping purposes, under all conditions of culture, whether under glass or in the open ground.

Second. It is one of the greatest producers of all varieties; and at all stages of growth is the handsomest and most attractive of all American sorts.

Third. It is of a very deep green color, which it retains during a much longer period of growth than any other variety, while in symmetry of form it is so regular, so uniformly one like the other as to create comment wherever it is seen.

Fourth. The quality is superb, being exceedingly brittle and crisp. The flavor is delicate and entirely devoid of the bitter taste so frequently noticed in other varieties.

Fifth. As a shipping Cucumber, the "Sterling" cannot be surpassed, as it holds up in color and quality better than any other variety.

**630. Northrup, King & Co.'s Extra Long White Spine.**

(Sold only in sealed packages.) An extra fine variety for either greenhouse or open ground. It grows to a large size in a very short time and commands fancy prices on account of its fine form and appearance. The above illustration is an interior view of a greenhouse in which this variety is grown during the Fall and Winter, with the most satisfactory results.

**635. Ak-sar-ben.** One of the finest strains of white spine Cucumbers; vigorous and prolific. Fruit is uniform in size, averaging eight to ten inches long, dark green in color and handsome in appearance.

**640. Boston Pickling.** Very productive, grown largely for pickles. Fruit medium sized, very smooth, bright green.

**645. Chicago or Westerfield Pickling.** Fine for market gardeners. Medium length, pointed at each end; has large spines, deep green, very prolific. Good for pickling.

**650. Cool and Crisp.** A strain of white spine similar to the Arlington but larger. Fruit long, cylindrical, dark green. Fine for table use.

**655. Davis Perfect.** A carefully selected strain of Extra Long White Spine, suitable for both green-house and outdoor culture. The fruits are of large size, splendid quality and fine color. The flesh is tender, brittle and of excellent flavor. A favorite for market use.

For illustration see following page.

**660. Early Frame or Short Green.** Used for table and pickling. Very productive. Fruit straight, bright green.

**662. Early Fortune.** An excellent white spine variety. Early, very productive and disease resistant. Fruits average nine inches long; flesh white, very firm, and crisp. Color, rich, dark green.

**665. Early Green Cluster.** Fruit small, grows in clusters of two or three, very prolific, short, dark-green.

**668. Green Prolific.** Very productive, planted both for slicing and pickling. Four or five inches long when large enough to slice.

**670. Improved Arlington White Spine.** The fruit is uniform in size and shape averaging 7 to 8 inches long. Color dark green, quality excellent and contains but few seeds.

**675. Japanese Climbing.** A vigorous grower, can be trained on a trellis. Fruit from 12 to 16 inches long, dark green and smooth. Flesh pure white, crisp and tender.

**680. Klondike.** One of the best varieties for slicing. It will produce handsome, very dark green fruits slightly striped at the ends, equal in appearance to hot-house specimens. A white spined Cucumber of medium early maturity, fruits averaging about eight inches in length and two inches in diameter, uniform in size and shape.

The vines are very hardy and productive and continue long in bearing. Market gardeners find this variety especially desirable because it retains its dark green color much longer and is less affected by the hot sun than most other sorts. Much used as a shipping Cucumber, but is also adapted for the home garden.

**685. Long Green.** Produces dark-green fruit from 10 to 14 inches long. Flesh solid, crisp and of fine quality. Fine for slicing and pickling.

**690. Northrup, King & Co.'s Pickling.** It would be difficult to "make to order" a better pickling cucumber than this. Fruit is medium length, pointed at each end; color deep green. It is very productive. Flesh, crisp and tender, and covered with spines. The best sort for those who like a crisp, tender pickle.



**695. Northrup, King & Co.'s Siberian.** The earliest. Fruits are small, being about 3 inches in length and 1½ inches in diameter. Plants productive and fruits of excellent quality.



**697. West Indian Gherkin or Burr Cucumber.** Small, oval, green fruits about two inches long. They are covered with soft, fleshy spines. This variety is used only for pickling.

**700. White Spine Evergreen.**

Northrup, King & Co.'s Special Strain. A fine strain, bearing blue green fruit, often from 10 to 12 inches in length, smooth, round and of fine quality. Especially recommended for hot-bed culture. The seed we offer has been taken from fruit selected for its ideal form, uniformity in size, shape and color and general appearance. A very satisfactory variety in every way.

**705. White Spine, Improved.** Large, handsome, uniform fruits. Crisp and of fine flavor.

**710. White Spine, Peerless.** Larger than the Improved, but not quite so early.



Northrup, King &amp; Co.'s Pickling Cucumber



Northrup, King & Co.'s Improved New York Spineless Egg Plant.

## GOURDS.

Desirable where an immense amount of vine is wanted quickly. Fine for a screen. Fruit is unique, ornamental and often useful. It will keep for years when properly ripened. Plant after ground has become warm, in rich soil.

726. Apple.	Apple shaped.....	Pkt.,	5c.
727. Calabash.	For pipes.....	"	10c.
728. Dipper.	Very useful.....	"	5c.
729. Hercules Club.	4 feet long.....	"	5c.
730. Nest Egg.	White like an egg.....	"	5c.
731. Orange Shaped.	Round, yellow.....	"	5c.
732. Pear Shaped.	Striped.....	"	5c.
733. Sugar Trough.	Very large.....	"	5c.
734. Dish Rag.	Handy for the kitchen.....	"	5c.
735. Mixed.	All varieties except Calabash and Dish Rag.....	"	5c.
736. Small Varieties.	Mixed.....	"	5c.
737. Large Varieties.	Mixed.....	"	5c.

## 739. GARLIC.

About 250 lbs. required per acre.

Garlic is a perennial plant with a bulbous root and belongs to the Onion family. It has flat leaves and the bulb is composed of several parts or bulbels similar to those of a multiplier onion set. Garlic has a strong penetrating odor and flavor and is highly esteemed for flavoring soups, stews, etc. We cannot offer seeds but can supply the bulbs or sets.

Prepare the ground as for onions, separate the sets and plant them in drills eight inches apart and four to six inches apart in the drill, covering two inches deep. Cultivate like onion sets. When the leaves turn yellow, pull up the bulbs and dry in the shade.

## KALE or BORECOLE.

**Culture.** More hardy than cabbage and makes excellent greens. Improved by a touch of frost. Sow in May and June, cultivate same as cabbage.

**740. Dwarf Curled Kale.** This is more hardy than cabbage and makes excellent greens for Win er and Spring use. The leaves are curly, bright green, very tender and delicate in flavor. Sow seed in May or June, transplant in July and cultivate same as cabbage. For early Spring use sow in September; protect over Winter with a covering of straw or litter.

**742. Tall Green Curled.** Grows up to three feet high, bearing long, light green leaves, finely curled at the edges. Extremely hardy, being improved, rather than injured by a moderately heavy frost.

## MUSHROOMS.

**Lambert's Pure Culture Spawn.** Lambert's Pure Culture Spawn is far superior to the old style varieties and much better results can be obtained from its use. With every order of Mushroom spawn we send free of charge complete instructions for Mushroom culture. Bricks weigh from 18 to 24 oz. A brick will spawn ten square feet of bed. With Lambert's Pure Culture Spawn it is impossible to raise poisonous Mushrooms.

## EGG PLANT.



**Culture.** Egg Plant seed should be sown in hot-beds in March or April and transferred to pots or boxes when an inch or two high and planted out early in June in rows 2 1/2 feet apart each way, cultivation same as for cabbage. One-fourth pound seed will provide plants for one acre.

### 715. Northrup, King & Co.'s Improved New York Spineless.

The handsomest type and most perfect strain of Egg Plant in existence. The plants are stocky and low branching, stalks entirely free from spines, and produce continually handsome, deep purple fruits of largest size and most perfect symmetry. The plants usually bear eight to ten immense fruits of the finest quality before being killed by frosts.

**716. Black Beauty.** A little earlier than our Improved New York Spineless but usually not quite so large. The skin is a rich, lustrous dark purple. Very desirable for the market as the fruit holds its rich coloring a long time.

## ENDIVE.

This plant furnishes an attractive and appetizing salad for the Fall and Winter months, or by repeated sowings a supply may be had nearly all the year round. Useful in flavoring soups, stews, etc. Makes delicious greens if cooked like spinach.

**Cultivation** same as for lettuce. The bleaching of Endive is brought about by drawing the leaves together into a head and tying them. This should be done a month before it is wanted for table use.

One ounce of seed required for 100 feet of row.

**718. Broad Leaved Batavian.** Leaves are broad, thick, green, more or less twisted and waved, with white mid-ribs. It forms large hearts, which when blanched, form one of the best winter salads. Crisp, tender and fine flavor.

**720. Green Curled.** Leaves finely cut.

**725. White Curled.** Very beautiful, leaves need no blanching.

## KOHL RABI.

**Culture.** Sow the seed in the Spring in drills 3/4 of an inch deep and 2 feet apart and when the plants are a few inches high thin to 15 inches. Cultivate same as beets. Bulbs grow above ground. Root should be stripped and cooked like turnips. Kohl Rabi has a much sweeter and finer flavor than the turnip. Sow in June for Fall use.

Two pounds of seed required per acre.

**745. Early White.** Very early, small, handsome, white bulb. Best early variety for the table.

**746. Early Purple.** A very desirable sort for forcing or early outdoor planting. Bulbs are of medium size, purple, flesh white. Very early, with small top, the leaf stems being tinged with purple.

## LEEK.

**Culture.** Sow seed in early Spring in rows 1 foot apart and 1 inch deep. When 6 inches high, transplant 4 to 6 inches apart in rows 12 inches apart, setting the plants in the ground up to their center leaves and as they grow draw the soil up around them. This process tends to bleach the Leek and to make more palatable the edible portion. Seed required per acre, 4 lbs.; 1 oz. for 100 feet of drill.

**750. Large American Flag.** or "Broad London." A large growing variety.

## MUSTARD.

**Culture.** When used for salads, sow thickly in shallow drills, 6 inches apart. Successive sowings may be made every week or two. When grown to produce seed for use in pickles, pepper sauce, etc., sow early in rows a foot apart and 3 inches apart in the row.

**753. Smooth Leaved.** Bears large, smooth leaves, well above the ground. Plants grow quickly, upright when young and spread out with age. More easily prepared for table than the rough sorts.

**755. Southern Giant Curled.** Used largely for salad, especially in the South.

**757. White Mustard.** Makes delicious salad or greens.

## OKRA or GUMBO.

**Culture.** Sow the seed thickly in rich ground as soon as the ground has become warm, in drills 3 feet apart and one inch deep. Thin out to ten inches apart and cultivate freely.

**760. Mammoth Long Podded.** Exceedingly productive and bears splendid dark green pods from eight to nine inches long. It does not grow hard.

**762. Dwarf Green.** Grows low but stocky and is very productive.

**763. Long Green.** The plant is dwarf, but pods are long and tender.

**764. White Velvet.** The plants are about three and one-half feet high, early maturing and very productive. The pods are white, long, smooth and are tender until nearly full sized.



Leek.



# LETTUCE

**Culture.** Sow in the house or in frames any time after March 10th; if put outdoors, as early in the Spring as ground can be worked and at intervals of two weeks until June 1st. Soil should be a rich sandy loam with plenty of humus. Rows to be 1½ feet apart, plants two inches apart in row after thinning. Two ounces of seed will sow 150 feet of row, 4 to 5 lbs. required per acre. For later treatment see note at foot of next page.

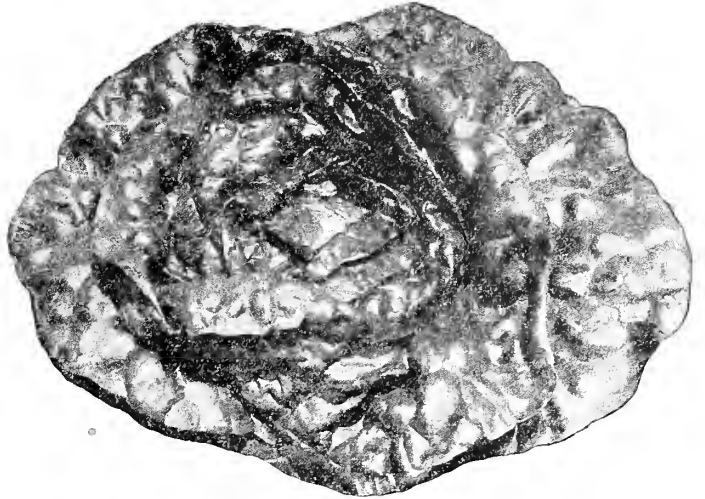
## HEADING VARIETIES.



### 765. Northrup, King & Co.'s "Sterling."

This Lettuce delights all who grow it. It is equally suited for the market gardener and for the private planter. The market gardener will find that this Lettuce will command a premium over other sorts on account of its appearance and quality, while for private gardens no other Lettuce approaches it for table use. For salads it is unequaled.

Our Sterling Lettuce comes under the "crisp heading" class. The plants attain quite a large size, but are never coarse. The outer leaves are of a beautiful green, changing toward the center of the head to a rich golden yellow. In flavor it is extraordinarily sweet and crisp, and is of such beautiful appearance and superior quality as to cause universal remark. We never give the name "Sterling" to a variety that is not the very best of its class, and purchasers may rely on finding this Lettuce the best they have ever put on the table.



Northrup, King & Co.'s Sterling Lettuce.



### 770. Northrup, King & Co.'s Market Gardeners.

This is one of the very best of the "butter" head Lettuces. It is a very great favorite with market gardeners and holds the lead in point of popularity.

**785. Big Boston.** A large heading, forcing sort, very hardy and vigorous, with broad, comparatively smooth, thin and very hard, bright green leaves. Quite tender. Indoors this forms a solid head, while outside it is less distinctively a heading sort.

**787. Black Seeded All Seasons.** This variety is of very attractive appearance, having large, pale green leaves and a large, round head of splendid quality. Very crisp and tender, having that "buttery" quality so much liked. It resists heat exceptionally well, and as its name implies may be grown in the open from early until late in theseason.

Black Seeded Tennis Ball Lettuce.

**780. Black Seeded Tennis Ball.** One of the best for forcing or early outdoor planting. Plants medium size, having thick, dark green leaves. When grown, forms solid heads which are crisp and tender.



Crisp as Ice Lettuce.

**795. Crisp as Ice.** The heads are large and very solid. When cut open they have a rich, creamy heart and are so tender and brittle as to warrant the name, "Crisp as Ice."

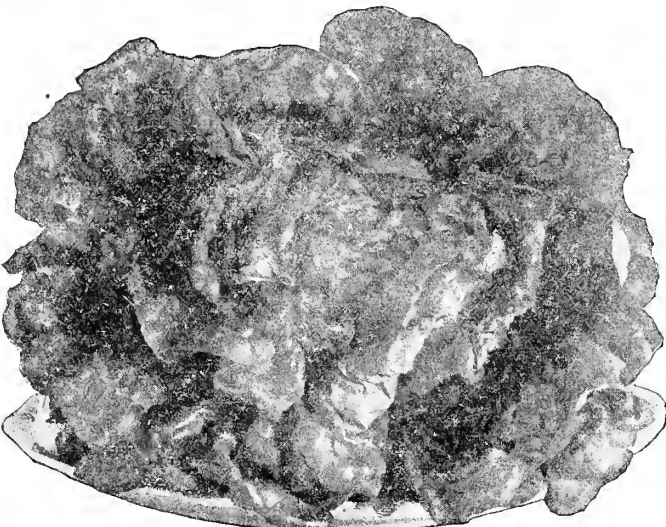
**800. Deacon.** OR SAN FRANCISCO MARKET. While this sort does not grow so large as some kinds, it has few outside leaves, grows very solid, and has that delicious, buttery flavor so much sought for and esteemed. The center of the head blanches to a bright yellow shade and is very crisp and tender, remaining so for a long time, even in hot weather. One of the finest sure-heading summer sorts.

**810. Golden Queen.** An early sort. One of the best for outdoor glass. The color is a beautiful golden yellow. The heads are so solid that there is no waste.

**820. Iceberg.** Has an unusually solid head. The white, main ribs of the leaves curve toward the center, and keep the interior thoroughly bleached. It is quick growing and always crisp and tender whether propagated in early Spring or in the hot days of Summer.

May King Lettuce.

**790. California Cream Butter.** Forms round, crisp, solid heads, of buttery flavor, medium early. One of the best summer varieties of head Lettuce.



# LETTUCE

## HEADING VARIETIES.



Prizehead Lettuce.

**835. Prizehead.** A large loose headed, thin leaved sort. The very large leaves are crimped, bright green, tinged on the edges with reddish brown and are crisp and sweet.

**838. Wayahead.** A very early, firm heading sort, of fine appearance and quality. The heads are larger and tighter than other earlies. Outer leaves light green, under leaves are blanched to a buttery yellow tint.

**839. New York or Wonderful.** Produces immense heads, solid as a cabbage. The heart blanches beautifully, being crisp, tender and delicious. A robust variety, roots deeply and therefore can resist hot, dry weather. Outer color is a distinct apple-green. Extensively grown all over the country, it is especially popular in California where it is known as Los Angeles Lettuce. A desirable standard summer Lettuce.

**845. Salamander.** A very bright green and attractive variety. It forms large, solid heads of thick, smooth, very tender leaves of the finest quality. The leaves are broad, thick, somewhat crumpled and closely overlapping so that the inner ones are very finely blanched. It withstands hot weather remarkably well and can be planted any time during the Summer. One of the best head Lettuces to grow out-doors. Also remains long in head before going to seed.

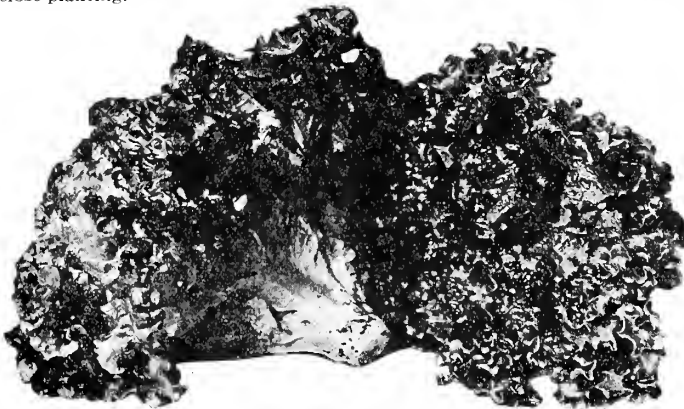
**846. Mammoth Black Seeded Butter.** An enormous, compact, cabbage-like, head Lettuce, which is tender, crisp and sweet. The leaves are thick, yellowish-green and the inner ones are beautifully blanched. It is a good sort for all seasons.

## Fertilizers for Lettuce.

To grow the best tender Lettuce it is advisable to have a very rich, friable soil. The quality of this vegetable is largely dependent upon the rapidity with which it is grown, therefore liberal manuring and thorough preparation are profitable. We recommend for this purpose, Northrup, King & Co.'s Sterling Garden and Lawn Fertilizer and Sheep Manure, listed on page 96 of this catalogue.

## LOOSE LEAVED VARIETIES.

**815. Grand Rapids.** The most popular variety for greenhouse planting. It will make a quick growth even under adverse conditions. It is of handsome appearance, a strong grower and not subject to rot. When exposed for sale it keeps from wilting longer than other varieties. Its upright habit of growth permits close planting.



Grand Rapids Lettuce.

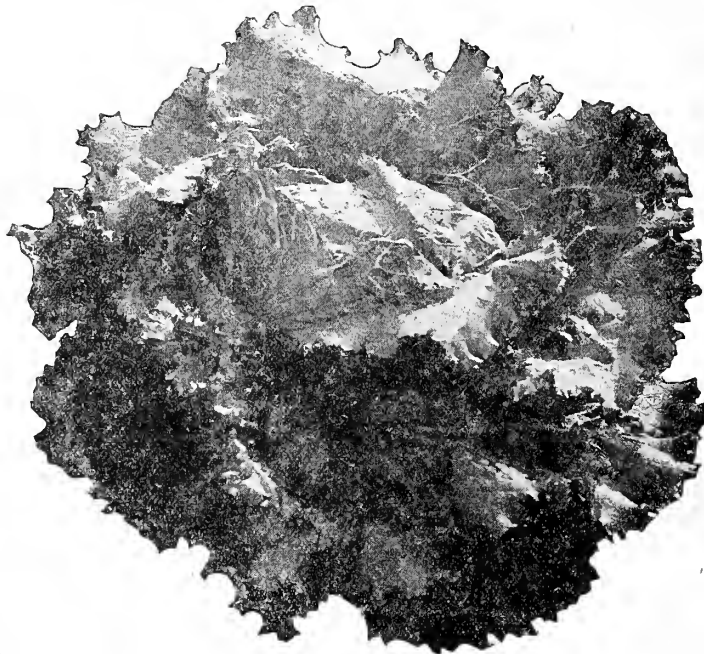
**825. Improved Hanson Head.** The Hanson is one of the most valuable of the crisp heading sorts, in all respects one of the very best out-door varieties for both the professional and amateur gardener. This variety is very hardy and will stand extremes of weather better, perhaps, than any other of the "crisp heading" sorts.

In color it is of an attractive green. The head, which attains a large size, is hard, tender and crisp, with a blanched appearance in the center.

The table quality is excellent, wholly free from bitterness and remains in splendid condition for use long after it has reached maturity.

**830. May King.** An unequaled variety for early spring planting in the open ground, exceptionally early, attaining a size suitable for use before other sorts. Also good for forcing. It is extremely hardy and very quick growing. The plants grow six to seven inches in diameter, with the outer leaves folded closely, forming the plant into a solid head. The outer leaves are light green, slightly tinged with brown; the inner leaves are bright yellow and of a fine, rich, buttery flavor. Each head will weigh nearly a pound on the average.

**837. Tenderheart.** A large, new, early head Lettuce. Plants are uniform, and nearly all head with but few outside leaves. Very attractive and appetizing as well as being very tender, crisp, succulent and sweet. Tenderheart is very hardy and will withstand the early summer heat splendidly. Will remain in head without running to seed, for two weeks after it is fully headed up. The color of the outside leaves is pale green with a slight reddish brown tinge.



Improved Hanson Head Lettuce.

**775. Black Seeded Simpson.** One of the best, either for forcing under glass or for open ground culture. It forms large, thin, loose leaves of light green color, very tender, crisp and of fine quality. A fine sort for Summer, as it withstands the heat; also for the home garden.

**805. Early Curled Simpson.** A popular sort, free from bitterness; forms large, loose heads.

## ROMAINE, COS OR CELERY LETTUCE.

**817. Paris White Cos.** A very distinct variety of Lettuce, having large, elongated, compact heads, that blanch mild and crisp. The plants are of erect growth, forming a tall, slightly oblong bunch of large, crisp leaves.

## Culture for Head Lettuce.

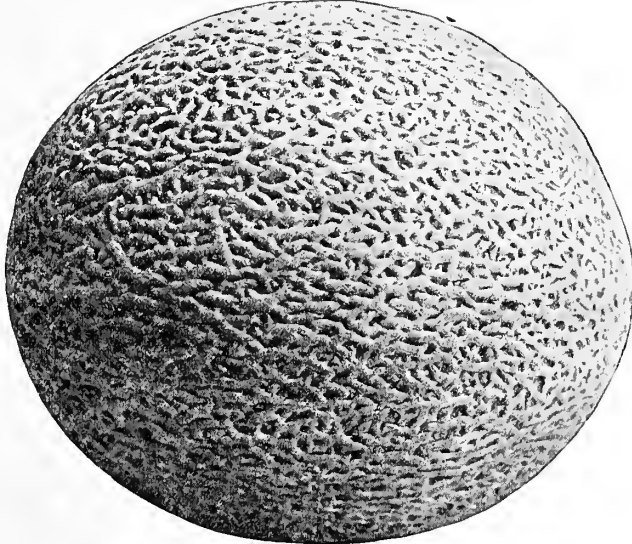
Assuming that the Lettuce plants have been started as suggested at the top of page 25, they should be transplanted as soon as they begin to crowd. Place them six inches apart in the row in extra rich soil and if the sun has become very hot, it will be best to furnish partial shade. Keep the soil well cultivated around the plants to destroy weeds and preserve a soil mulch. Water frequently during dry weather.

When the heads start to develop work up the soil around them so as to induce close, compact growth. As soon as the outside leaves are large enough they should be brought together and tied over the top with raffia. This should be done more loosely than with Cauliflower and the plants must be closely watched so that they can be used at the right stage of development. Tying the heads in this manner helps to blanch them and make them deliciously tender and crisp.

# MUSKMELON

## Rocky Ford Cantaloupes.

This Melon is just the right size to serve in halves and its delicious flavor makes it ideal for that purpose. The profits to be derived from growing these Melons are very large when proper soil, seed and cultivation are used. Perhaps the most important consideration is the seed to be planted. We are offering below the three best strains of Rocky Ford Cantaloupe, each of which has been bred with a particular point in view. Earliness, rust resistance, netting and solid meat are highly important characteristics which have been secured by the persistent efforts of Melon breeders in the varieties we offer.



Netted Rock.

**916. Rust Resistant Pollock.** This type is the highest development, both as to netting and rust-resistant qualities, yet attained in the Rocky Ford Cantaloupe. When vines of some varieties are entirely killed by rust and blight within two weeks after the shipping season, these vines are green and continue to blossom and set fruit until frost. The Melons run very uniform in size and the exceptionally heavy netting is laced and interlaced over the entire surface, making it an ideal shipper. The flesh is green, shading to salmon about the seed cavity which is unusually small. The meat is solid and fine grained, flavor unexcelled. While a few days later than the Early Watters, it is more prolific. Desirable where there is an excessive rainfall.

**917. Netted Rock.** This strain represents the highest possible attainment in Cantaloupe development. It is undoubtedly the heaviest meated Melon of the Rocky Ford type. It produces Melons of uniform standard size, 90 per cent of which are completely covered with a beautiful gray, lace-like netting which with the small seed cavity, are the most essential points in carrying and keeping qualities of the Cantaloupe. The flesh is green, tinged with a delicate salmon pink around the seed cavity, which is the smallest of any strain of Rocky Ford. The flesh is firm but not tough or stringy, and has a sweet, luscious, melting and superb flavor.

**918. Early Watters, Improved.** The earliest of all the Rocky Ford Cantaloupes. It is prolific and usually the first setting is very heavy, most of the fruit ripening at the same time. It is of fine shape and size and inclined to run to solid netting. The flesh is light green and of the best quality. The seed cavity is larger than in the other strains, and does not make as good a shipper, but for home use is very desirable. Not recommended for sections having excessive rainfall as the vines are inclined to rust, but where early Melons are an object or for dry localities, or under irrigation it is the most valuable Cantaloupe.

**919. Improved Pollock or Eden Gem.** This Melon is the earliest of the solid net type and very prolific. The color of the flesh varies from green to golden yellow, solid, fine grained and of the finest flavor. This variety is rapidly growing in favor with shippers and is equally desirable for the home garden.

**921. Salmon Fleshed Rocky Ford.** This variety has rapidly grown in favor. The flesh is a rich salmon color and fine grained. The seed cavity is unusually small, which accounts for its superior shipping qualities. Very desirable for the home garden.



## 915. Northrup's Yellow Meated Japan.

This is by far the finest, most luscious and pleasing Muskmelon ever grown. The vines are hardy, permitting earlier planting, very prolific, and produce very large fruits, nearly as early as the smaller varieties. The Melons are nearly round, not deeply ribbed and covered with patches of netting. The skin is yellowish white when ripe. The crowning feature of this Melon is found in the thick, melting, delicious, salmon-colored flesh. It is extremely rich, sweet and highly flavored. We know of no other sort which will give as great satisfaction as our Yellow Meated Japan Muskmelon.

**Culture.** Muskmelons delight in moderately rich, light, warm, mellow loam. The seed should be planted in the Spring upon the arrival of settled warm weather. Plant seeds 1 inch deep in hills, 4 to 6 feet apart each way, and as soon as the plants begin to run, remove all but 4 of the most likely ones.

Cultivate and keep free from weeds until the vines prevent.

Two to three pounds of seed required per acre.

**912. New Melon, Honey Dew.** Honey Dew is a new type of Melon. It is not a Cassaba, the seed cavity being like the ordinary Cantaloupe. The color is dull white when ripe, size about six inches in diameter from top to bottom and seven to eight inches long, all Melons being nearly the same size. Weight averages eight to ten pounds.

The Honey Dew Melon has no netting, but the rind though thin, is very tough and so close that the excellent flesh is practically sealed up and it keeps in fine condition for two to three months after the crop is gathered. Color of flesh, a rich green from close to the rind to the seed cavity and the flavor delicious to all who enjoy a good Melon. It has the sweetness of honey and the freshness of morning dew.

We recommend sowing the seed in the northern states in pots or cold frames after April 15th, so that established plants may be ready for setting in the open ground June 10th to 20th.

**997. Cassaba Melon.** Cassaba Melons are a little different from both Muskmelons and Watermelons. The skin is smooth and hard, flesh extremely tender, rich, sweet and juicy.

**930. Early Netted Gem.** Slightly oval in form; finely netted, being a light golden hue when fully ripened. Flesh light green in color, melting and luscious in flavor, ripens close to the skin.

**935. Emerald Gem.** Very early. A richly flavored Melon, salmon colored flesh which is almost crystal in appearance, the flavor being rich, very sweet and luscious. The skin is quite smooth, and of a beautiful deep green color. This variety is very prolific and is one of the most valuable sorts in cultivation.

## 940. Extra Early Citron or Early Nutmeg.

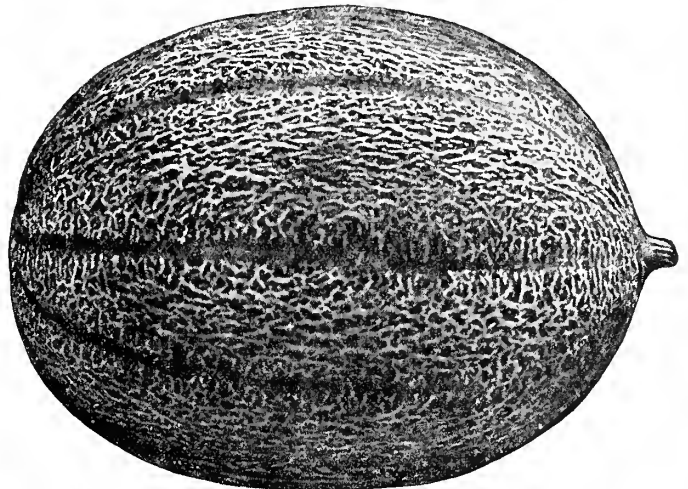
A standard and well known variety. Fruits are round, 6 to 8 inches in diameter, ribbed and netted. Flesh is thick and pale green in color, very sweet.

**945. Extra Early Hackensack.** Fruit attains a good size, weighing four to six pounds each. The Melons are round, heavily ribbed; skin is green and thickly netted; flesh is light green, of delicious flavor, rich and sugary. It is also a luxuriant, healthy grower, and exceedingly productive. The earliest of all large netted Melons.

**950. Hackensack.** Fruit very large, round, heavily ribbed and netted. Flesh green, thick, coarse, very sweet and fine flavor. Hardy and very productive.

*A garden this year is just as important as it was previously. Every Community will profit by putting more enthusiasm into gardening than has been shown in the past. Good seeds, good soil and proper cultivation produce ample rewards.*

**970. Osage or Miller's Cream.** Fruit medium sized, oval, slightly ribbed, dark green in color, banded with lighter streaks, covered more or less with shallow netting. The flesh is deep salmon color and very thick, there being but a slight cavity in the center of even the largest fruit; the quality is exceptionally fine. A favorite variety for the later markets. We have taken a great deal of pains to develop the thick, deep, rich colored and fine flavored flesh of this sort.

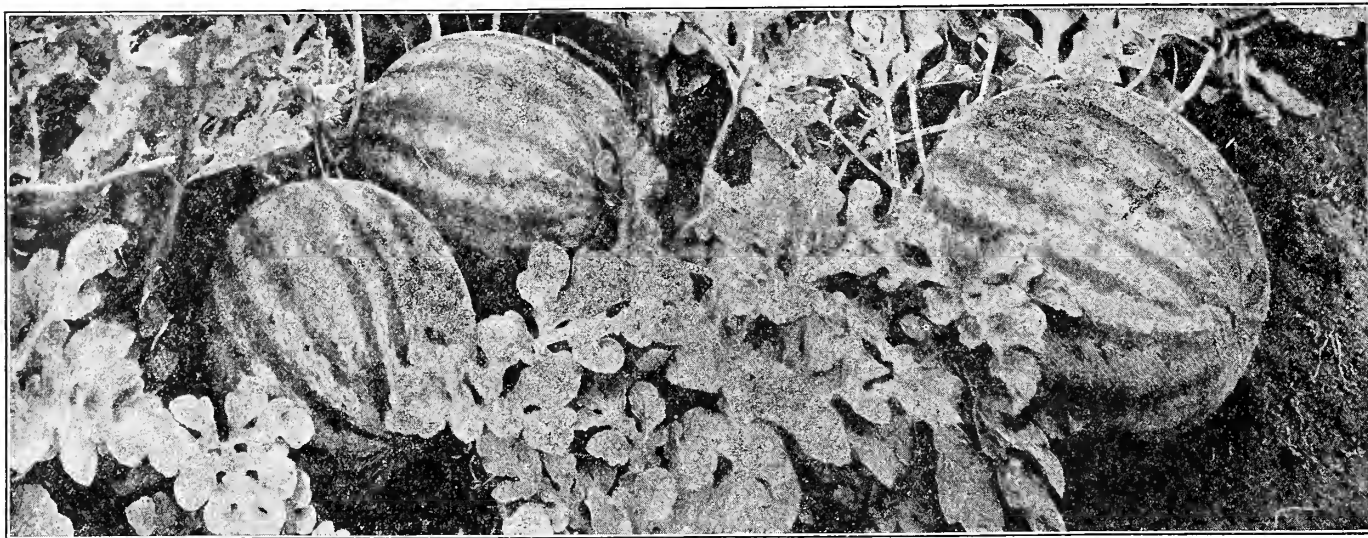


Osage or Miller's Cream Muskmelon.

**975. Paul Rose or Petoskey.** Combines all the good qualities of the Netted Gem and Osage, the varieties from which it originated, possessing the sweetness of the latter with the finely netted appearance of the Gem. Fruit oval, about 5 inches in diameter, shape and general appearance similar to the Netted Gem, of a light green or faint golden hue when fully ripe. Firm flesh, a rich orange red like the Osage, but even sweeter and higher flavored; ripens close down to the rind, with small seed cavity; the most uniformly good of any Muskmelon grown. Best shipper, just the size for hotel and table use. Really has no equal as a market Melon for professional growers and one of the very best sorts for the home garden.



# WATERMELON



Northrup, King & Co.'s Klondike Watermelon. The Earliest Watermelon Grown.

**Culture.** The soil for Watermelons must be light, rich and sandy, for if grown on a heavy soil the quality will be poor, and they will not be so early. When there is no more danger of frost, drop 8 to 10 seeds in hills 8 to 10 feet apart each way, covering about 3/4 inch deep. As soon as plants commence to run, thin out to 3 best plants in a hill and cultivate until the vines cover the whole ground. If slow to fruit, pinch off the ends of the growing shoots. Ashes or air-slacked lime sifted on the young plants while dew is on is good to keep the insects off. One ounce will plant about 30 hills, and it takes 4 to 5 pounds to one acre.

## 850. Northrup, King & Co.'s Klondike.

The earliest. The great objection to extremely early Watermelons has been their inferior quality. This has been entirely overcome in the Klondike, which is not only remarkably early, but as sweet, delicate and melting in flavor as any variety grown. Flesh is of a deep scarlet. Rind thin, and on this account is not a particularly good shipping sort, but is emphatically the variety for home use and sale. Will ripen in altitudes where it has not been thought possible to mature a good Watermelon.



## 855. Northrup, King & Co.'s Kentucky

**Wonder.** One just cause for criticism of many of the new Melons is that, for the most part, they have been, at the best, slightly improved strains of some old and well known sort. This cannot be said of Kentucky Wonder. It is distinct, and the Melon itself proves it. Oblong shape, attaining a good size; skin dark green and beautifully marked. Flesh a beautiful rich scarlet color, crisp, rich, sugary, always firm and solid, never mealy or tough.

**865. Fordhook Early.** An extra early Watermelon of large size. The rind is tough, making it desirable for shipping purposes. Flesh is bright red and very sweet.

**867. Golden Honey.** The flesh is a beautiful glistening amber yellow, very tender, and has a most delicious flavor. It is medium early, of uniform large size, oblong shape and of handsome appearance. The rind is light green, with mottled stripes. Any prejudiced against a yellow-fleshed Melon, will disappear once the Golden Honey is tasted. Has no hard core or stringy sections. Rind is thick and seeds are large and white, some having a small black tip.

**870. Harris' Earliest Watermelon.** Sweetest, largest and best shipping early Melon. Melon is oval to oblong; beautifully striped with green and gray; bright red flesh, which is sweet, tender and delicious. It is the Melon for everybody to grow who wants to be first in the market with fine large Melons weighing 20 to 30 pounds.

**875. Ice Cream or Peerless.** Rind thin, light mottled green. Flesh bright scarlet. Solid to the center. Sweet as honey.

**880. Kleckley's Sweets.** The finest of all medium early Watermelons for home use. The rind is too thin and tender to stand long distance shipment. The fruits are uniform in size, oblong in form; the skin is a rich dark green; the flesh, bright scarlet; the seeds lie close to the rind, leaving a very large, solid, red core. The flesh is rich, sugary and melting, being entirely free from stringiness.

**885. Kolb's Gem.** Very large, slightly oval, striped with light and dark green. Rind very hard and firm. Flesh bright red, solid, coarse grained, but tender and sweet.

**895. Phinney's Early.** Very early, quality good; hardy. Bears abundantly, medium sized, oblong melons with thin, smooth rind; flesh pink and tender.

**900. Sweetheart.** Remains in condition for use longer than any other sort. Fruit early, large, oval and very solid. Flesh bright red, tender and sweet. Rind thin, but strong, making it a good shipper.

**905. The Dixie.** This Watermelon is the best shipping Melon grown, being even larger, earlier and far more productive than the Kolb's Gem, which has heretofore been considered the best Melon for shipping.

**908. Tom Watson.** A large, oblong Melon, the skin of which is dark green, with thick netting on the entire surface, quite distinct from other varieties. It averages 18 to 24 inches long and 10 to 12 inches in diameter and weighs 50 to 60 pounds. The rind is thin but tough and flesh a bright, attractive red color, crisp, sweet and delicious. The heart is large with no core. The seeds are brown, tipped with white. The appearance and quality of this Melon make it desirable for both home and market use.

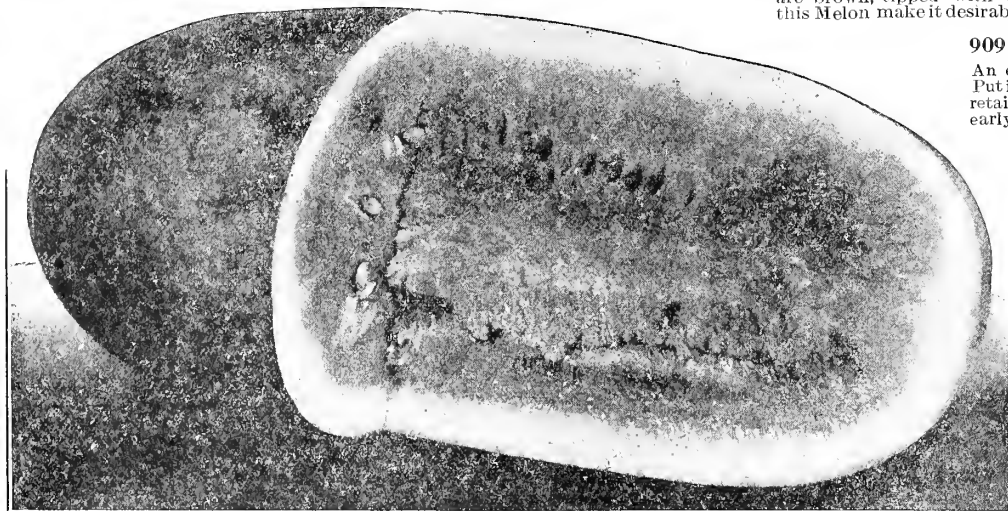
## 909. Winter Queen Melon.

An exceptional melon for fine keeping quality. Put in a cool place it keeps long into the winter and retains its delicious sweetness and flavor. It is early and prolific; the flesh is red, firm, almost as hard as citron, brittle and deliciously sweet. The skin is very light green, almost white, and its shape is round about 10 inches in diameter. Very pleasing to those who want a winter variety. Like the Casaba it should not be eaten right off the vine, but be allowed to lie around until the first sign of decay. It decays slowly like an apple, not like other watermelons.

## 910. Citron for Pre-

**serves.** Fruit round and smooth. Is not eaten raw, but is used for making a very clear, transparent preserve of peculiarly fine flavor. Flesh, white and solid.

Over 20,000 dealers throughout the Northwest handle our seeds. Many of these dealers carry a stock of our bulk garden seeds. Others whose sales are not so large, handle our seeds in packets which are displayed in the Sterling Seed Box. You may be assured of the same quality whether sold in bulk or packet.



Kleckley's Sweets Watermelon.

## Culture

Soil for Onions should be rich in humus and plant food. Fresh stable manure and barnyard litters are entirely out of place on the Onion field. They are usually loaded with weed seeds and will interfere very much with tillage. Compost heaps will destroy the weed seeds and put the manures in such condition that they will readily mix with the soil. Manure from sheep sheds or pig pens applied with a spreader before the ground is plowed in the Fall makes excellent fertilizer for Onions because it is usually comparatively free from litter and foul seeds.

We especially recommend our Sterling Fertilizer for this crop. This should be applied at intervals during the season.

### 1000. Northrup, King & Co.'s Minnesota Red Globe.

This beautiful strain of Red Globe Onion surpasses all others in earliness, productiveness, perfection of shape, uniformity of size, richness of color, and long keeping qualities.

For years we have been patiently working to improve our Red, Yellow and White Globe Onions, not only by reducing the size of the neck, but also rounding off the projecting bottom, while at the same time giving due attention to the shoulder of the bulb. This has resulted in a true globe-shaped Onion of great solidity and long-keeping qualities; the very small neck not only prevents water-logging, rot and shrinkage, but also insures early maturity and perfect ripening down.

The color of Minnesota Red Globe is a deep blood-red, extra dark, while the surface is smooth and glossy. The flesh is white, tinged with light purple, fine grained and unsurpassed in flavor.

Many of the largest growers in the United States have annually used our Minnesota Red Globe Onion seed for more than a decade, convinced that Northrup, King & Co.'s strain is unequaled for the North.

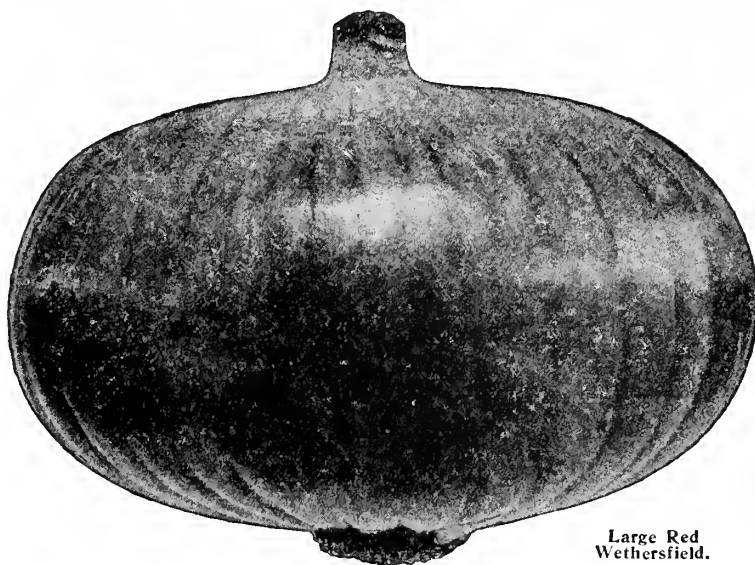
For a long time Onions have been the biggest money-making crop for the farmer. It is true that the Onion market has its ups and downs, like all produce, but at the average price of about 65c per bushel in the Autumn, and the ordinary yield of 400 to 500 bushels per acre, onions yield highly satisfactory returns to the grower. One often reads glowing accounts of enormous Onion profits, yields of 600 to 1,000 bushels are not unknown. With intensive cultivation, experience and skill these yields are within the reach of all in a normal year.

Everywhere globe Onions bring the best prices and since our Minnesota Red, Yellow and White strains are the most highly developed of all globes we confidently recommend them to growers who want Onions that will top the market.

A sound, well-ripened Onion crop can be put away in the Autumn and held for 6 to 8 months under suitable conditions with a shrinkage of not much more than a pound per bushel per month. Experienced growers are careful, however, to plant a select strain of seed which has been bred to produce long-keeping, perfectly ripened bulbs. Consequently the demand for our Minnesota strains is continually increasing; many growers now place their orders a year in advance.

## ONION

## RED VARIETIES



Large Red Wethersfield.

### 1085. Southport Red Globe.

In all markets, globe Onions are in greatest demand, being of such shape there is practically no waste. The Onion which is perhaps the best known throughout the United States is the Southport strain. The Red Southport is perfectly globe-shaped and very handsome in color. The Onions measure from two and a half to three and a half inches in diameter, and are very uniform both in size and shape. Our seed has been selected to thin neck plants which ripen down to a hard, solid ball, producing the largest proportion of marketable Onions. They are also good keepers. The globe varieties, as a rule, yield the largest crops, from 800 to 1,000 bushels an acre being reported frequently. The Red Globe meets with the greatest demand in the Northwest.

### 1015. Large Red Wethersfield.

Very popular, a sure and heavy yielder; the best keeper, grows to an immense size, solid, oval-shaped flattened on top; skin purplish red, smooth and glossy; flesh white, slightly tinged with pink, strong flavored. The best variety for poor or dry soil.

### 1020. Extra Early Red Flat.

A medium sized flat variety, good yielder. Ready for use about two weeks earlier than Large Red Wethersfield. Fine grained and mild in flavor. Very desirable for early marketing. Best where seasons are very short. Good keeper.

### 1025. Large Red Globe.

A handsome, dark red, globe-shaped Onion. It averages three inches in diameter and nine to ten ounces in weight. The bulbs have thin necks, which ripen down forming a hard, solid, globular bulb. This is a fine strain which will please all who grow it.

### 1105. Red Bermuda.

Bulbs of this variety are similar in form and early ripening to the Bermuda White, but grow larger in size, ranging from three to four inches in diameter; very flat and of a light pink color. The flesh is white, slightly suffused with pink.

## YELLOW VARIETIES.

### 1010. Northrup, King & Co.'s Minnesota Yellow Globe.

We have for years been working on the popular Yellow Globe Onion to bring it to the same degree of perfection attained by our Minnesota Red Globe and we now feel that we have succeeded in producing a type of Yellow Globe unequaled by any other strain in existence. It is a large globe shaped Onion of the same general characteristics as our Minnesota Red Globe and should prove very satisfactory to the grower. If yellow Onions are preferred, try this strain.

### 1080. Northrup, King & Co.'s Prize Taker.

This Onion has become a great favorite on account of its large size and great solidity. It is perfectly globe-shaped, with straw colored skin; the necks are very small and the Onions always ripen up hard. An excellent keeper, exceedingly fine flavor, grows to an enormous size. Onions weighing five pounds having been grown from seed the first year.

### 1095. Southport Yellow Globe.

Very similar to the Southport Red Globe, except that it averages a trifle smaller and matures a little earlier. The skin is a rich brownish yellow; the flesh white, crisp and fine grained. Great care has been given to the selection of our seed, so as to give uniformity of size, shape, small necks and heavy yield.

### 1120. Long Keeping Australian Brown Onion.

This remarkable Onion is of medium size, wonderfully hard and solid and most attractive for market, both in form and appearance. It is extremely early in ripening and makes no stiff necks or scallions. Every seed seems to produce a good-sized Onion, and the bulb begins to form very quickly when the plant is not over 3 inches high. Planted with the Red Wethersfield it will average nearly four weeks earlier, and ripen off more uniformly. It has the reputation of keeping indefinitely, and we think from its firmness and hardness that it will keep in good condition longer than any other Onion known. The color of the skin is a clear amber-brown. These Onions have been known to keep nearly a whole year in good condition, and on this and other accounts the strain will commend itself to onion set growers, who often lose heavily in carrying their crop because the sets do not "keep."



Yellow Globe Danvers Onion

# ONION

## YELLOW VARIETIES—Cont.

**1034. Ebenezer or Japanese.** An excellent Yellow Onion, of winter and is of mild, pleasing flavor. At this time the seed is used mainly for raising sets, which when set out the following spring produce large, beautiful, matured onions in July. The Ebenezer has won great popularity because of its wonderful cooking and keeping qualities.

**1035. Yellow Danvers Flat,** or Round. Very productive medium size, round, flat, early. Very reliable, small neck; thin, pale yellow skin. Flesh white, fine grained and mild.

**1040. Yellow Globe Danvers.** The bulbs are large and globular, with very thin necks; rich orange-yellow color. An enormous yielder and a fine keeper. Flesh white and mild.

**1045. Yellow Strasburg or Dutch.** Later, darker in color and more flat than Yellow Danvers Flat. Flesh pure white and of mild flavor. The best variety to grow for sets, and is a splendid keeper.

**1093. Ohio Yellow Globe.** A very desirable strain of yellow globe-shaped Onion. The main features which distinguish this strain from others are its distinct and attractive shape; handsome, bright, even color; ripens early and all at once; necks very small and cure down very close. The bulbs are firm, solid and keep exceptionally well during the Winter. The yield, size and quality are all that could be desired in a yellow globe Onion. Although this strain was first introduced in Ohio, the seed we offer is thoroughly acclimated and is suitable for northern conditions.

## WHITE VARIETIES.

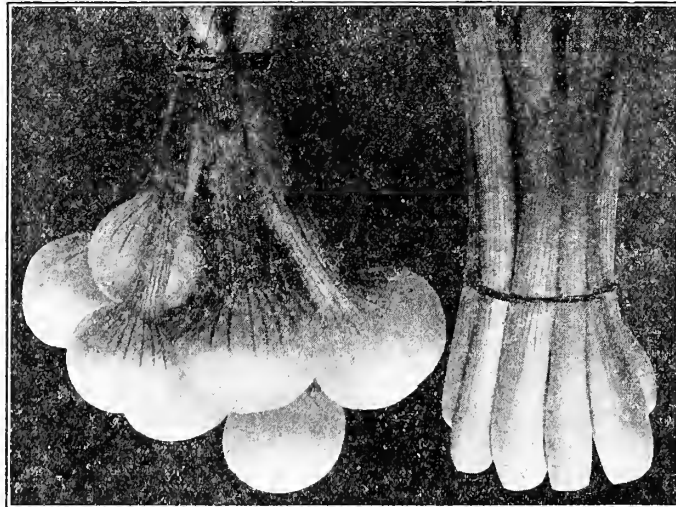
**Culture.** Onions thrive well in any good soil, although very sandy soils are apt to dry out to too great an extent. Probably the very best soil for this purpose is old land that has been kept up to a high state of fertility and free from weeds, fall plowed and thoroughly pulverized in the spring.

Sow the seed early in the spring, about  $\frac{1}{4}$  inch deep in rows 12 to 15 inches apart. It is tedious work thinning Onion plants so to avoid unnecessary labor it pays to plant seed of highest germinating qualities; then the seed can be sown a trifle thicker than the Onions are to stand and little thinning will be required.

In the case of large varieties, like Prizetaker and Mammoth Silver King, the young seedlings should be transplanted so as to permit the plants to reach full size and development.

As soon as the plants begin to break through the soil, pass over the rows with a wheel cultivator which works both sides of the row at once and throws a little soil away from the base of the plants and as soon as cultivated they should be weeded. Cultivate and hand weed every two weeks throughout the Summer as it is much easier to handle the crop in the Fall when entirely free from weeds.

One oz. of seed for 100 feet of row; 5 to 6 lbs. seed per acre.



White Bunching Onions.

White Welsh Onions.

**1032. White Bunching.** An extra early, round, white variety of very fine quality, long before the other sorts are ready. For early bunching or using green, it is unsurpassed.

**1033. White Welsh.** A very hardy perennial variety of Onion used only for bunching or early green Onions. Much superior to the Egyptian Onion, which grows a tough woody stem. This Onion is entirely free from this objection. Sow seed thinly in rows 12 to 16 inches apart. Perfectly hardy and require no mulching. Seed may be sown in late Summer or early fall months for early spring Onions.

**1030. White Barletta.** This variety is more distinct on account of its earliness. It is earlier than the White Queen. It is of a beautiful waxy white color and grows  $1\frac{1}{4}$  inches in diameter and  $\frac{3}{4}$  of an inch thick, with finely formed bulbs, slightly flattened at the top. Its earliness will highly recommend its use as a substitute for onion sets. An excellent bunching and pickling sort.

**1125. Mammoth Silver King.** In appearance, the most striking Onion grown. We hardly know which to commend the most, its large size, symmetrical appearance and beautiful, silvery flesh or its sweetness, tenderness and mild flavor. These qualities make it the best for exhibition and fancy high-priced trade. Not recommended for the extreme North except for bunching.



Northrup, King & Co.'s Minnesota White Globe Onion.

## 1005. Northrup, King & Co.'s Minnesota White Globe.

White varieties are the mildest in flavor of any of the Onions and are, on this account, often preferred for family use. Our Minnesota White Globe is the most perfect in shape of any White Globe strain. Most White Globe stocks are marred by dark, rusty streaks. Our Minnesota White Globe is almost entirely free from this blemish and is the purest in color of any White Globe type. This is in every way the finest White Globe Onion in existence.

**1090. Southport White Globe.** White Globe Onions command the highest market prices when they are true globe-shaped and free from stain. Our Southport White Globe Onion meets these requirements, having a thin skin of purest whiteness. The flesh is crisp, fine grained, very white and mild. As soon as ripe, the bulbs should be stored in a cool, dark shed or dry cellar.

**1100. Crystal White Wax Bermuda.** This new variety is a large pure-white, flat Onion. During the last few years it has become very popular with the large growers of Onions in the South, especially in southwest Texas. It does very well under northern conditions and produces one of the mildest and sweetest of them all. It is very fine for slicing, the color being so clear and pure. The best seed is produced in Tenerife, Canary Islands. Our stock is genuine, but limited.

**1110. White Bermuda.** The bulbs are quite broad and flat in form. The color is not a clear white, as in our American varieties, but rather a pale straw; flesh crisp, solid and mild in flavor. The plants are extremely thin-necked, insuring even and early ripening.

**1055. Paris White Silver Skin.** An early, small, round, white variety. Excellent for bunching and pickling.

**1058. White Lisbon.** A large, round, fine white Onion of excellent quality. An exceptionally early variety, fine for using green or bunching.

**1060. White Pearl or Extra Early Bloomsdale.** While originally from Europe this is now fairly entitled to rank as an American variety. It is a pure silvery-white Onion of very quick growth, frequently maturing in seventy days from sowing the seed. Bulbs are flattened, of medium size, with silvery-white skin; flesh crisp and mild in flavor. This variety is largely planted for bunching and for sets.

**1065. White Portugal or American Silver Skin.** Bulbs medium size, ripening early and uniformly, with beautiful, clear white skin; flat, good keeper, delicate and mild flavor. Used largely for pickles, also as a bunching onion.

## 1075. Northrup, King & Co.'s Pickling.

For early bunching, pickling and sets. Small, hard, round; keeps well; pure white, does not turn green when exposed to the sun.

**1070. White Queen.** Small; noted for extreme earliness and mildness of flavor. Bulbs average about an inch in diameter and are much used for pickling.

## Fertilizers.

The two principal fertilizers for Onions are Nitrate of Soda and Muriate of Potash; the latter being used on muck lands. Nitrate of Soda furnishes the young plants with the most essential plant food, nitrogen, in soluble form. For fertilizers of all kinds see page 96.



## ONION SETS

We are Headquarters in the Northwest for Strictly No. 1 Northern Grown Onion Sets.



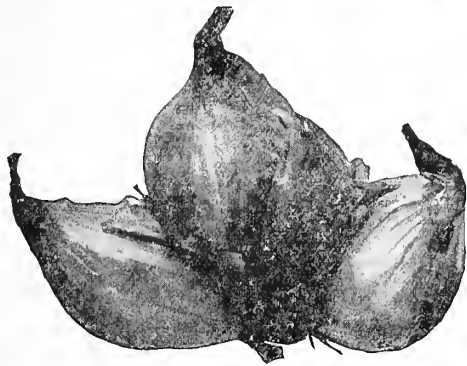
Red Bottom Onion Sets.



White Bottom Onion Sets.



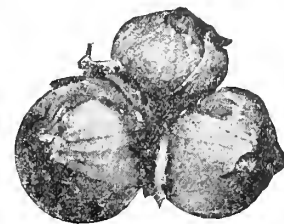
Yellow Bottom Onion Sets.



Yellow Multiplier Onion Sets.



Egyptian or Perennial Onion Sets.



Red Top Onion Sets.

### The Importance of Using Northern Grown Onion Sets.

The planting of Onion Sets is increasing rapidly year after year. They are used for several purposes. The Bottom Onion Sets produce a large Onion ready for market from four to six weeks earlier than can be had by sowing the seed and the product of the set is the same as that obtained by sowing seed. This enables the grower to sell his entire crop earlier in the season, at which time prices usually are higher than when the bulk of the crop reaches market. It also permits the sowing of another crop on the land the same year. Bottom Sets also produce good green Onions on most any soil in half the time it takes to raise them from seed.

Bottom Onion Sets are produced by sowing seed very thickly and they are harvested before they have reached full development. Our sets are small, one inch or less in diameter, dry and unsprouted.

Multiplier Onion Sets are formed through the division of the bulbs into many smaller ones; they are not grown from seed.

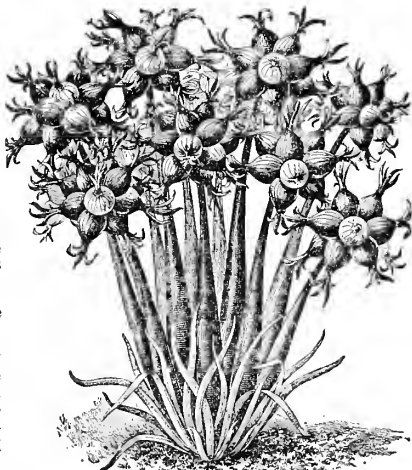
Red Top Sets are produced like seed on the top of the stalks. Top Sets make large bulbs one year and top sets the next.

We grow our own Onion Sets which enables us to produce hard, sound, clean sets of the best quality. As they are used to obtain Onions earlier than they can be had from seed, it follows, therefore, that Northern grown sets will produce Onions earlier than Southern grown sets. We clean them thoroughly so that when shipped they are free from trash and rubbish. Our Onion Sets are stored during the winter in a specially ventilated warehouse. In the Spring of the year they are hard, sound, and of excellent quality for rapid growth and bulb production.

### Egyptian Winter, or Red Perennial Onion Sets.

Hardy, for Sept. and Oct. Planting. Order now.

Distinct from other sets being hardy everywhere. Plant in Fall and leave in the ground all Winter. These sets never form large bulbs but produce the earliest, small, green Onions ready for home or market use weeks ahead of any other, unsurpassed in sweetness and tenderness. A few inches of coarse litter spread on the crowns after the ground freezes, will prevent root heaving. Orders will be filled in September. Values cannot be named at the time of compiling this page. Prices quoted in August on request.



Egyptian Onion Sets.

**About Prices.** Since the value of Onion Sets fluctuates greatly, our prices are subject to market changes. The prices existing at the time of publication are given in the Supplement to this catalogue. Top sets weigh 28 lbs. per bushel, all others 32 lbs. per bushel. All transportation charges on Onion Sets are to be paid by the purchaser, except where quoted postpaid. For methods of packing Onion Sets see below. If you handle Onion Sets in large quantities ask for special prices.

**White Bottom Sets.** These are small, solid and of a beautiful silvery white, a favorite sort in private and market gardens.

**Red Bottom Sets.** Northern grown. Bright, deep red in color, even and dry. The most popular variety.

**Yellow Bottom Sets.** Produced from seed which makes the finest yellow sets. Fine and dry, medium in size and unsprouted.

**Red Top Sets.** These are planted to produce both early green Onions and large eating Onions. We wish to call special attention to the fact that our stock is the genuine Red Top Set, unmixed with Egyptian Winter Sets, which are always cheaper, but practically worthless for spring planting.

**White Multiplier.** These are of a pure silvery-white color which runs up the stem, the flavor is very sweet and mild, superior to green Onions from other sets. They are enormously productive, frequently producing as many as twenty Onions in a single cluster from one bulb planted; of excellent quality and size for bunching. Ready for delivery on or about June first.

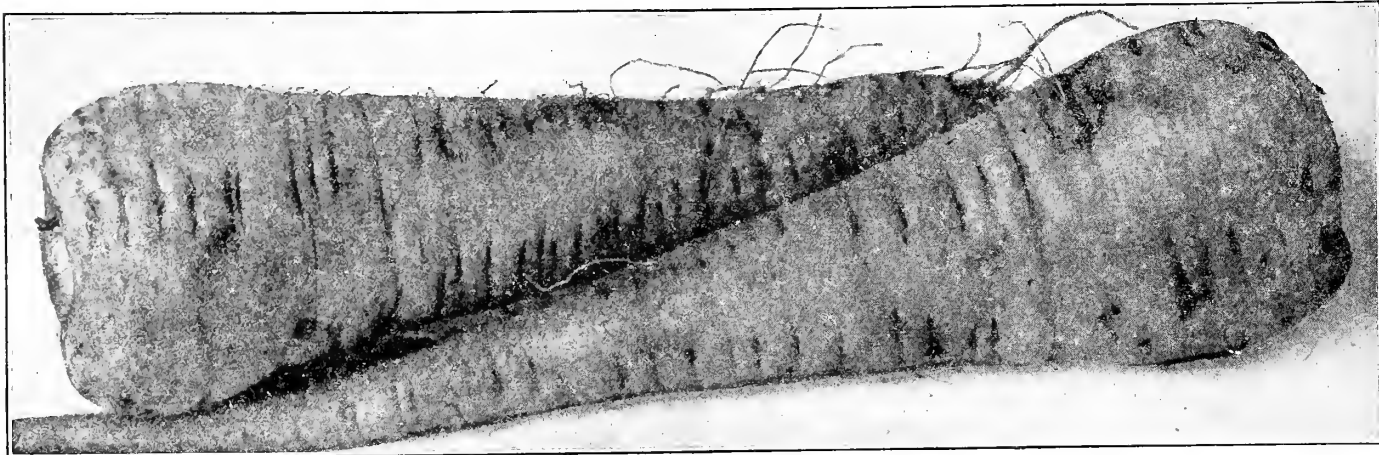
**Yellow Multiplier.** Often preferred on account of their earliness. Late in June they are fully ripe, and can be gathered. They are very productive, five to fifteen bulbs growing from one bulb set out.

**Garlic.** For description see page 24.

### How We Pack Onion Sets.

We will pack our Onion Sets in any way our customers desire, in bags, baskets or barrels. Prices named are based on the use of bags. If desired in barrels, we will pack three to four bushel orders and upwards at no additional charge. In our opinion the best, safest and cheapest method is to ship in bushel baskets. These will be furnished at an additional charge of 25¢ per bushel. In this way they carry safely to any part of the United States. The package is easily handled and perfectly ventilated, the sets are not crushed and the basket can always be found of use to the purchaser. Large buyers of Onion Sets should write us for special prices.

**Culture.** Soil requirements the same as for Onion seed. Place the Onion Sets 3 to 4 inches apart, according to size, 3 inches deep, in rows 1 foot apart. It is customary to furrow out the soil with a little hand plow early in the Spring. Set the Onion in this furrow right side up and cover with a garden rake and if the soil is dry it should be well firmed over the sets; 380 to 480 lbs. of sets required for an acre.



Northrup, King &amp; Co.'s Sweet Marrow Parsnip.

## PARSNIP

**Culture.** Work the soil very deep and pulverize the surface thoroughly. Sow the seed in early Spring,  $\frac{3}{4}$  of an inch deep, in rows 12 to 18 inches apart.

As soon as the young plants appear, cultivate and hand weed them, and when 3 inches high thin to 6 inches apart in the row.

Cultivate sufficiently to keep the soil loose throughout the season. Freezing improves the quality of Parsnips for table use, so it is customary to take up in the Fall when the ground begins to freeze what will be needed for winter use, leaving the remainder to winter over in the ground, or better still, pitting them as is often done with other roots so that access may be had to them at any time.

One oz. of seed for 200 ft. of row; 5 lbs. seed required for an acre.

### 1135. Northrup, King and Co.'s Sweet



**Marrow Parsnip.** This fine new Parsnip of English origin is offered with full confidence that it will become a prime favorite with all who use it. It is very fine grained and exceedingly sweet, while the peculiar "Parsnip" flavor is fully preserved. The roots are unusually smooth and attractive in appearance. The best of all Parsnips for the market or private garden.

**1140. Guernsey.** (Improved Half Long.) A greatly improved strain. The roots do not grow so long as the Hollow Crown, but are of greater diameter and more easily gathered. It is a very heavy cropper. The roots are very smooth; the flesh is fine grained, of most excellent quality.

**1145. Improved Hollow Crown Parsnip.** Our stock of this old time favorite is very smooth and fine. None better anywhere at any price.

## PARSLEY

**Culture.** Sow seed in shallow drills in the early Spring for border or in rows 12 to 18 inches apart; and thin the plants to 4 inches.

Cultivation should be frequent and weeds kept removed.

One oz. of seed will sow 150 feet of row; 6 lbs. of seed required for an acre.

### 1150. Dark Moss Curled.

The leaves are of an extra dark green color. It is very productive, and on account of the densely curled character of its leaves a quantity can be gathered in a short time.

### 1155. Double Curled.

Fine, dwarf, crimped leaves.

**1160. Extra Curled or Emerald Dwarf, ley.** This is a most beautiful variety. The moss-like leaves, of a handsome bright green color, are finely curled.

**1165. Fern Leaved.** This is most exquisite in form and color—invaluable as a garnishing plant, and suited for mixing with dwarf ornamental foliage plants in the flower garden.

### 1170. Plain, or Single Parsley.

Leaves flat, deeply cut but not curled. It is very dark green, is hardy and of excellent flavor, and for these merits is often preferred. It is used more for flavoring while the curled sorts are used for garnishing.

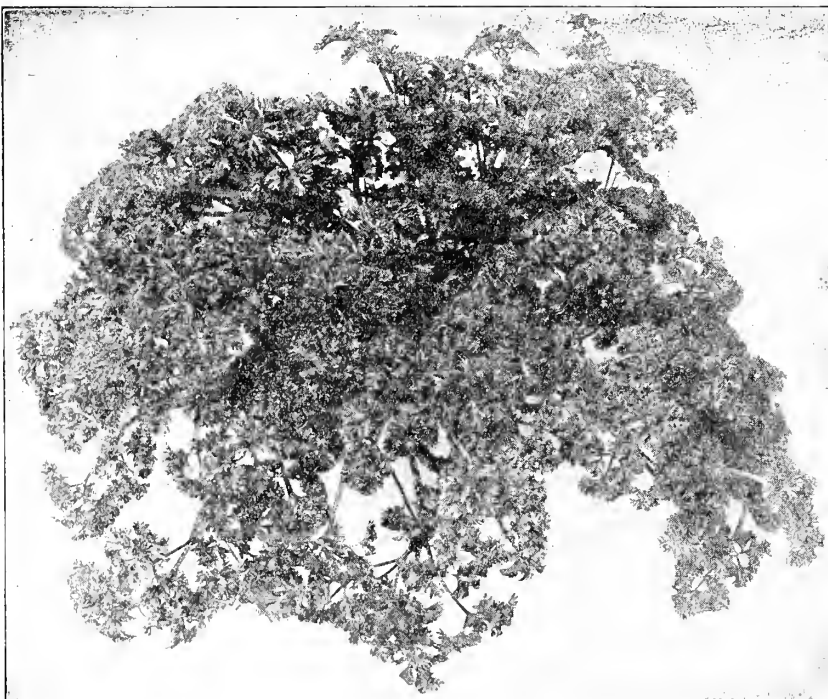
### 1175. Turnip

**Rooted.** The edible portion is the fleshy root, which resembles a small Parsnip, and is esteemed for flavoring soups, stews, etc. The flesh is white, a little dry with the flavor of Celeriac. The foliage is the same as the plain Parsley.

*All Northrup, King & Co. seed is carefully tested for purity and germination before it leaves our warehouse.*

*The seeds of each sample are counted, weighed and sprouted with scientific thoroughness*

*By selling seed of this kind that you know will grow, satisfaction is sure to follow.*



Dark Moss Curled Parsley.



Turnip Rooted Parsley.

## PEAS

### HARDY, NORTHERN GROWN STOCK.

Our Peas are Northern Grown. They are produced at an altitude of 5000 feet or more, making them the earliest, hardest, and most productive Peas obtainable. In addition, the localities where they are raised are free from insects and other damaging pests. For many years we have made a specialty of Peas and now grow thousands of acres where a few years ago we grew hundreds. Much skill and knowledge is required to grow Seed Peas properly and we employ experts of long experience to handle our crops. Our Peas are carefully grown, kept true to type, are bright, handsome, sound and of strong germination.

### EXTRA EARLY ROUND SEEDED VARIETIES.

These sorts are most largely grown by gardeners for the early market. They ripen more uniformly than any other Peas and where the stocks have been properly bred and kept rogued, from 75 to 80 per cent of the pods can be stripped from the vine at the first picking, enabling the grower to secure the highest prices. Round seeded varieties are not as sweet as the wrinkled sorts. Round seeded or smooth Peas weigh 60 lbs. per bushel.

#### 1280. Northrup, King & Co.'s Summit

**Extra Early.** Height 2½ to 3 feet. Seeds white. The "Summit" holds the record as the earliest and most even in maturity of the white seeded varieties. A great favorite with gardeners for early market. The entire profit on the crop sometimes depends on being able to market Peas early before the larger and later varieties are ready.

**1285. Alaska.** Height 2½ feet. Very early and exceedingly uniform in maturing its crop. The vines are very productive, bearing four to seven pods which are filled with medium sized, bright bluish green Peas of good flavor.

**1290. First and Best.** Height 2½ to 3 feet. Standard, white seeded extra early. Vines are vigorous and hardy, bearing from three to seven pods, each containing from five to seven medium sized Peas of good quality.

### EXTRA EARLY DWARF WRINKLED VARIETIES.

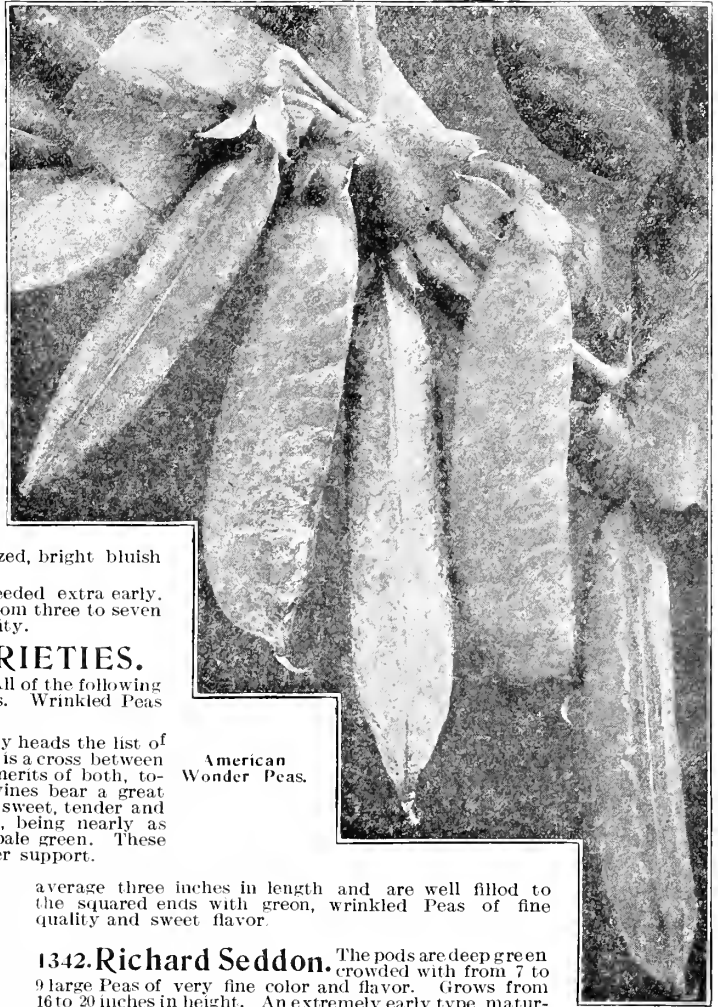
These require no brushing and are in large demand for family use. All of the following sorts are early, being but a few days later than the Round Seeded Sorts. Wrinkled Peas weigh 56 lbs. per bushel, according to the Minnesota State Law.

**1330. American Wonder.** Height 10 inches. This variety heads the list of the well known Champion of England and the Little Gem and has the merits of both, together with features not found in either of the parent varieties. The vines bear a great abundance of good sized pods containing five to eight large, exceedingly sweet, tender and well flavored Peas. This is the earliest of the dwarf, wrinkled varieties, being nearly as early as the smooth sorts. The seed is medium sized, wrinkled and pale green. These Peas are especially adapted to family use as they require no brush or other support.

**1335. Little Gem.** Height 16 to 18 inches. The vines are of dwarf growth and produce an abundance of round, well filled pods 2½ to 3 inches long, only three days after the American Wonder. The Peas are green, wrinkled, of sweet, delicious flavor and excellent quality. One of the best for family use. It remains fit for use longer than the American Wonder and Nott's Excelsior, and is thought by many to be sweeter.

**1338. Little Marvel.** An extremely valuable variety, especially suited to small home gardens, and is also a splendid variety for early market gardening. It matures very early and produces large crops. The vines grow about 15 to 18 inches in height. The pods are dark green, fair sized, produced in pairs and are closely filled with seven to eight Peas of extra fine flavor.

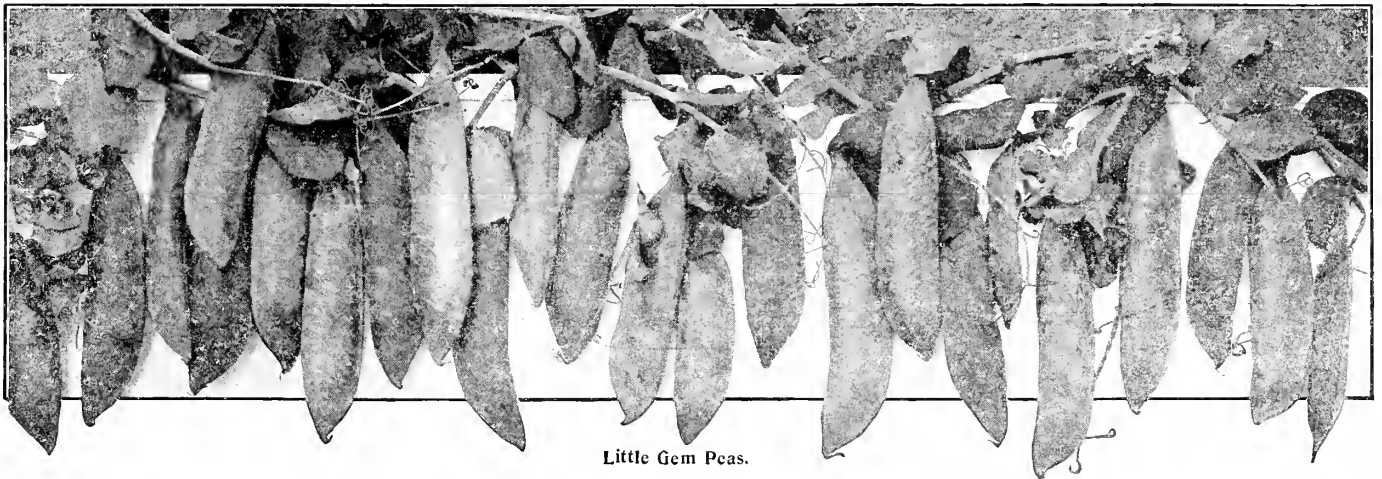
**1340. Nott's Excelsior.** Height 14 inches. This sort resembles a trifle taller and the pods are somewhat larger. It is of compact, dwarf growth and is nearly as early as the American Wonder. The pods



American Wonder Peas.

average three inches in length and are well filled to the squared ends with green, wrinkled Peas of fine quality and sweet flavor.

**1342. Richard Seddon.** The pods are deep green crowded with from 7 to 9 large Peas of very fine color and flavor. Grows from 16 to 20 inches in height. An extremely early type, maturing only a week later than the Alaska, when sown at the same time. A splendid all around early variety. On account of its immense productivity, evenness of maturity, compact, well filled pods and excellent color and quality, it is especially desirable for canning purposes. We found some plants in our fields last season bearing 15 to 20 pods, with a total of 100 to 150 large, fully formed, luscious Peas to the plant, proving the immense productiveness of this variety.



Little Gem Peas.

### EARLY WRINKLED VARIETIES.

Most of the following sorts are nearly or quite as early as the round seeded extra earlys, but they do not mature so uniformly. This, while making them less desirable for early market purposes, makes them better for family use as they will stand longer in fit condition for the table. They are much sweeter than the round seeded sorts. Wrinkled Peas are sold at 56 lbs. per bushel, complying with the Minnesota State Law.

**1300. Advancer.** Height 2 to 2½ ft. Seeds green, wrinkled. This variety is a great favorite in eastern markets on account of its superior flavor. The pods are broad and long and well filled to the ends. This sort is extensively used by canners on account of its quality and appearance. It is a very productive and satisfactory variety.



## PEAS

### EARLY WRINKLED VARIETIES.

**1270. Carter's Daisy.** (Early Dwarf Telephone.) Dwarf, large podded, needs no brush. The striking features of the Daisy Pea are its large pods and the way in which they are heaped up in ridges on the short, strong vines. The pods are nearly double the size of American Wonder or Little Gem, and are always well filled with large Peas of most excellent quality. The vines are 16 to 18 inches high, and being strong and thrifty require no support, making it an ideal variety for use where brush or stakes are not available. This Pea is desirable on account of the fine appearance of the pods, and always finds a ready sale.

**1304. Dwarf Defiance.** Grows about 2 feet high and matures an abundance of large, dark green pods about mid-season. In production it compares favorably with the taller, later varieties. The Peas are large and of splendid quality, sweet and of fine flavor.

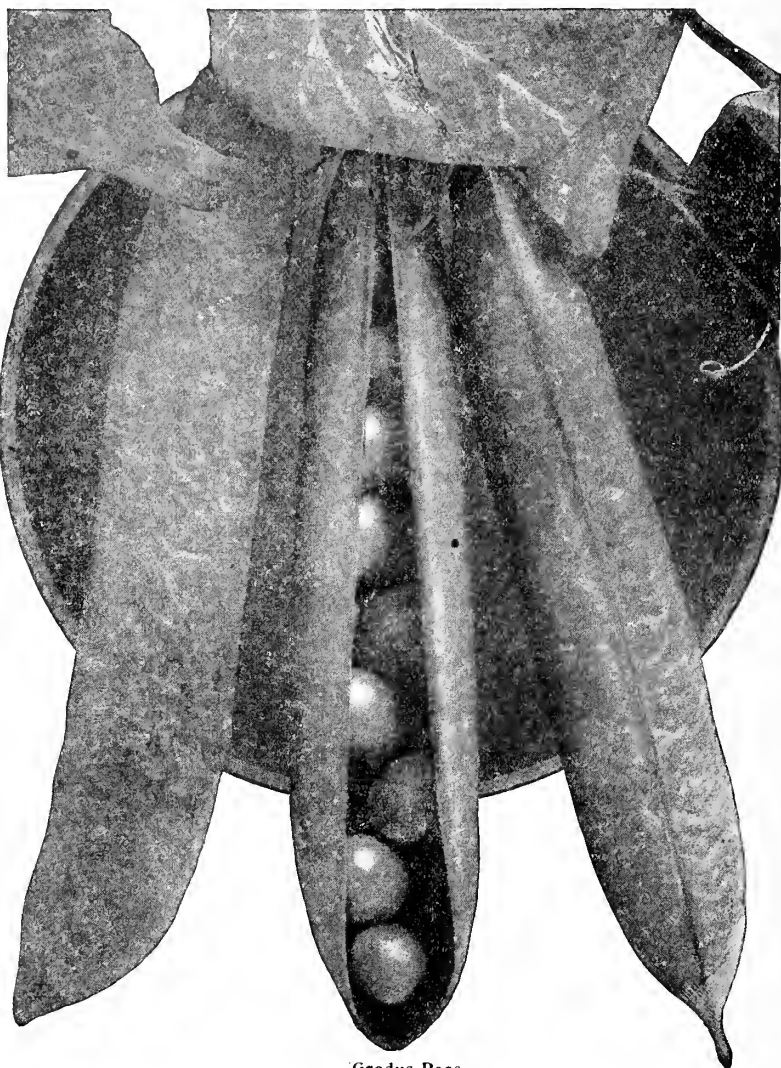
**1305. Gradus.** (Prosperity.) The earliest wrinkled variety. This grand, large podded, early, prolific variety as won the hearts of market gardeners everywhere. The vines are very vigorous and robust, growing to a height of about 3 feet. It is not only an abundant producer, but bears continually throughout the season. It is exceedingly early for a wrinkled variety, being only a day or two later than the earliest, small, smooth sorts. The pods are very large and are invariably well filled with from six to nine sweet, luscious, tender, wrinkled Peas of large size and delicious flavor. The Peas remain tender for some time after they are large enough to use.

**1310. Honey Sweets.** The strong, stiff vines grow from 12 to 15 inches high and require no brush or other support. The pods are similar in shape to the American Wonder but are broader and longer and are borne in greater abundance, the vine being fairly loaded with pods. They are two or three days later than the Wonders but the pods contain more Peas, there being on the average 7 or 8 in each. In flavor they are excellent, sweet as honey, rich and delicious. This is a splendid sort for both home and market use.

**1315. Horsford's Market Garden.** Height 2 to 2½ ft. Seeds green, wrinkled. In all respects very similar to the Advancer Pea, but an improvement on that variety in point of productiveness. Flavor very fine. The Peas are rather smaller than the Advancer, but are fully equal in other respects.

**1317. Laxtonian.** A new first early Pea of unexcelled value. It is not only early but is of splendid quality and unusually productive. Although it is a dwarf sort, growing only 15 to 18 inches in height, it excels in yield and equals in size of pod, the Gradus. The pods are deep bluish-green, pointed at the end, generally borne singly and measure 4 to 4½ inches in length. The peas number 7 to 10 to the pod, are large in size and of delicious flavor. The vines are vigorous in growth, deep green in color and require no support.

**1325. Thomas Laxton.** Large podded, extra early Pea. This fine early Pea was raised by crossing Gradus with the Alaska. In earliness the Thomas Laxton is only two or three days behind the Alaska, but the pods are very much larger, containing on the average seven or eight large, sweet, wrinkled Peas of the very richest flavor. The vines attain a height of from three to three and one-half feet. It is of harder constitution than the Gradus, and is earlier and of darker colored pod. In flavor this Pea is unsurpassed.



Gradus Peas.

### MAIN CROP VARIETIES.

Planted at the same time as the extra earlies or dwarf varieties, these come into bearing when others are gone. For the most part they stand a long time fit for table use, and as a rule they are, except when noted, sweeter than the early sorts. The pods are large and they stand longer in fit condition for use. Wrinkled Peas are sold at 56 lbs. per bushel in compliance with the Minnesota State Law.

**1352. Alderman.** This is a very large podded Pea, very robust and vigorous, producing pods of the largest size. The pods are even larger and longer than the average large podded sorts, and are well filled with large Peas of most excellent flavor. In habit, the vines are strong and branching, bearing rich, deep-green, straight, handsome pods averaging 4½ to 5 inches in length, pointed at the end. This variety belongs to the tall growing main crop of Peas. The vines are from 3½ to 4 feet in height. A point of superiority which must not be overlooked is the unusual flavor and quality of the Peas. As is true of most wrinkled varieties they are delicious, but the Alderman is of a quality surpassing many of the others. Also a good sort for shipping.

**1360. Champion of England.** 4 to 5 feet in height. This has been considered for a long time the standard main crop or late Pea for summer use. From this variety has sprung the whole race of green wrinkled Peas. The vines are very vigorous and productive, bearing an abundance of large, well-filled pods. The Peas are light green, wrinkled, of fine quality and delicious flavor. Hardly any Pea is sweeter than this.

**1265. Colossus.** New, sweet wrinkled, mammoth podded Pea. This splendid Pea is of the same large podded type as the Telephone, but the pods are larger and the Peas sweeter. Excelling as it does, in these particulars the well known sort mentioned, the Colossus Pea surpasses all other large-podded varieties in another particular, that of productiveness. In other words, a pint of Colossus Pea pods will yield as many shelled Peas as a quart of most other sorts; a bushel as many as two bushels. Quality is always to be preferred to quantity, but a Pea which will give better quality and larger quantity is the Pea to plant: that Pea is the Colossus. We urge early orders, and that at least a small quantity of these Peas be included with every order, as far as possible.

**1370. Everbearing.** Height 2½ to 3 feet. As the name indicates this variety continues long in bearing and is very prolific. It is probably the best sort for late Summer and Autumn use. The broad pods, which are of a nice green color, average three inches in length. The Peas are very large, green, wrinkled and of excellent quality. They cook very quickly, are tender and of superior flavor. Excellent for family use.

**1275. Potlatch.** A fine, new variety of great merit. The vines are vigorous, growing 15 to 18 inches high, with dark green foliage. The long pods are a rich, dark green in color, often measuring six inches in length, with 8 to 9 enormous peas in a pod. The vines are sturdy and the pods are borne in pairs. It is wonderfully productive and the way the Peas shell out is astonishing. Potlatch matures early and is unusually satisfactory to grow.

**1375. Stratagem.** Height 20 inches. The foliage is large and the vines strong and robust, requiring no support. It is very prolific and bears many very large, well filled pods containing large, dark green, wrinkled Peas of rich, sweet flavor. Our stock is very fine and of first-class quality.

### Culture for Garden Peas.

Sow seed 2 to 4 inches deep in rich soil very early in the Spring and for a succession put in varieties that mature at different periods, or if dwarfs only are desired, sow a few rows every 10 days throughout the season. For hand cultivation sow in rows 15 inches apart, but if grown on a large scale it is best to sow in rows from 2 to 3 feet apart and cultivate them with a horse.

Tall growing Peas may be sown broadcast to advantage upon very clean soil or new breaking. They may be supported with a woven wire fence or poultry netting. Sow in double rows eight inches apart and stretch the wire support between the rows. Fasten securely at each end with posts using stakes between the posts.

Two lbs. of seed will plant 100 ft. of row; 115 to 140 lbs. of seed required an acre in drills, and if broadcast 175 lbs.

## PEAS

### MAIN CROP VARIETIES.

#### 1260. Teddy Roosevelt.

A Giant Podded Main Crop Pea.

The largest "podder," surest "cropper" and heaviest "yielder" of all the main crop sorts. The Telephone and Stratagem were the first large-podded Peas to be introduced. Naturally they created a sensation because they were advertised widely, and are at present the most largely used in America of any of the large-podded varieties. They have, however, one serious defect; the pods contain very few Peas.

This fault has been remedied in some of the later introductions, and notably so in the Teddy Roosevelt. This grand Pea resembles the Telephone in color of pod and foliage, and in habit of growth, but the pods are larger and contain more Peas. A bushel of pods will shell out nearly twice as many Peas as the Telephone. The vines are enormously productive, being completely covered with immense, long pods, well filled with from 8 to 9 large Peas of the richest flavor. This variety grows from 4 to 5 feet high and, as an abundant cropper, is superior to all other sorts.

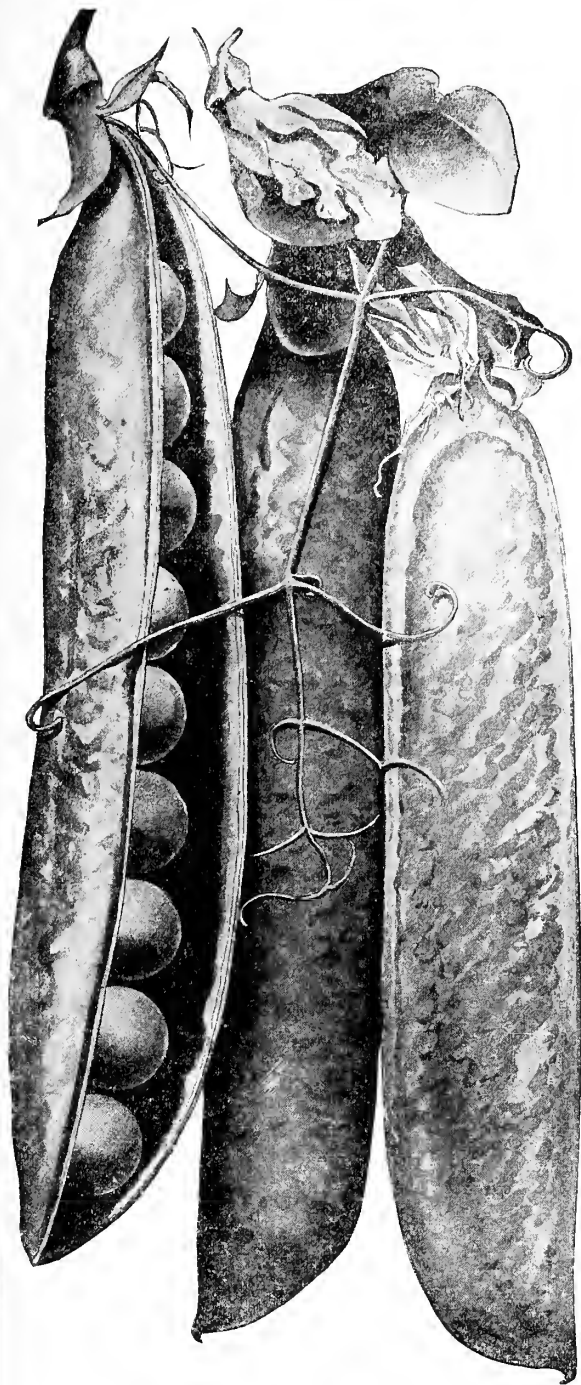
Nothing in the long line of Peas excels the Teddy Roosevelt in richness, sweetness and flavor, and it ought not take a gardener long to figure out that a bushel of pods that will give as many Peas as two bushels of other varieties is the kind to grow. The demand is so great every year for Teddy Roosevelt Peas that our stock is usually exhausted early in the season.

#### 1385. Telephone.

This is now the leading Pea with market gardeners, as it is in all particulars a market garden variety. It comes into bearing fairly early, yields abundant crops of large, fine appearing pods and Peas are sweet and luscious. This variety meets with the ready approval of buyers, when placed on sale and is therefore a popular sort with Pea growers. It is a great cropper, continues long in bearing, and fills the basket quickly. The vines grow about 3½ to 4 feet in height, are very vigorous and strong and have large, coarse, light colored leaves. Each vine bears on an average seven to ten pods, which are ready for picking in about 65 days. The immense pods are straight, and of fine appearance, and contain eight to nine large, wrinkled Peas, closely packed, tender, sweet and of exquisite flavor. The seed we offer has been carefully selected and is very prolific and will please all who grow this variety this season.

#### 1390. White Marrowfat.

Height 3½ feet. Grown on account of the great quantities of pods which it bears and for canning purposes. The vines are of strong, sturdy growth but mature the pods quite late. The large, cylindrical, light colored pods are well filled with round, smooth, light yellow Peas of somewhat dry and mealy quality.

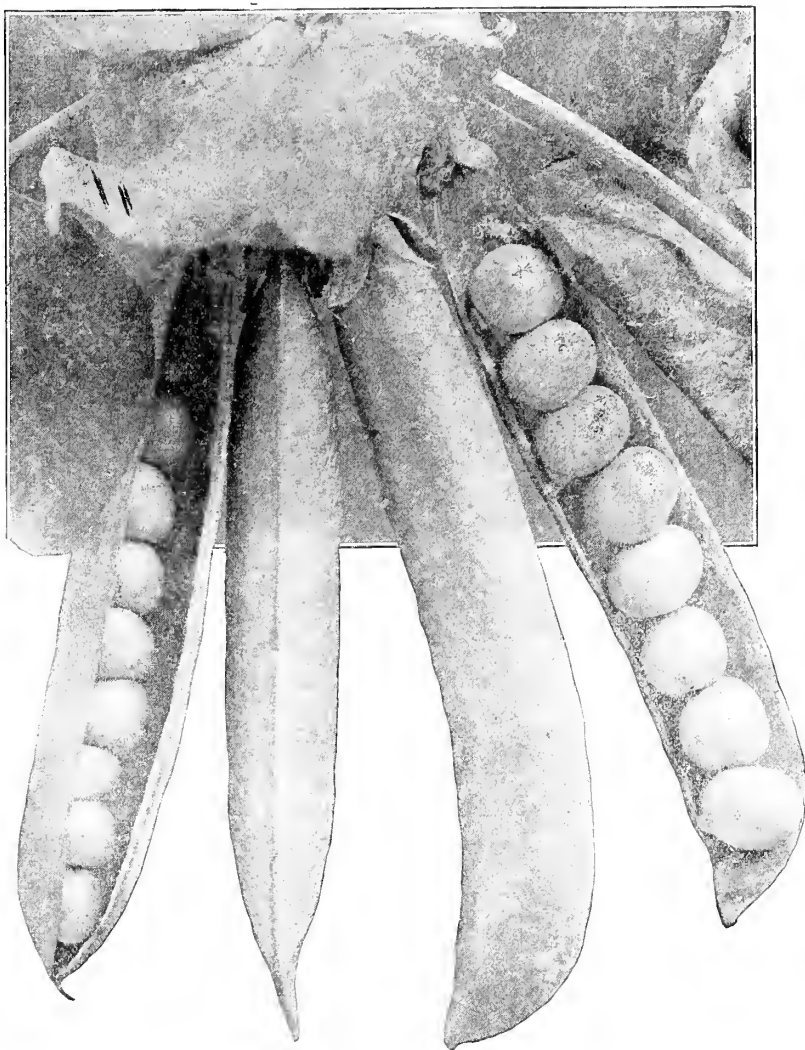


Giant Podded Pea, "Teddy Roosevelt."

**1362. Duke of Albany.** Resembles the Telephone in appearance, but the vine is not quite so tall, being 2½ to 3 feet in height. The pods are larger than the Telephone and produced more abundantly. They measure 4 to 4½ inches long and are light green in color. Peas are light green and very much wrinkled.

**1400. Dwarf Gray Sugar.** This is an edible podded variety. Vines grow only 15 to 18 inches in height, with purplish blossoms. Sugar Peas are not shelled, but pods are cooked same as string beans. Quantity limited.

**1402. Mammoth Melting Sugar.** This is another of the edible podded varieties. The pods are picked when the Peas are only half developed and at that stage there is no stringiness, but are sweet, brittle and appetizing. This variety is quite late, growing 4 to 5 feet high and bearing large pods 4 to 4½ inches long, often curved or twisted. Sugar Peas are usually very scarce, but we have a limited stock of fine quality to offer this year. In very short supply.



Telephone Peas.

## PEPPER

**Culture.** Plant seed  $\frac{1}{2}$  inch deep in the hot bed in March, or in boxes in the house, set in rows about  $1\frac{1}{2}$  feet apart each way in the garden about corn planting time. One oz. of seed will produce 1,500 plants.

**1180. Chinese Giant.** An enormous fruiting variety, double the size of Ruby King, averaging 12 to 15 inches in circumference. Notwithstanding its large size, it is very early and very prolific. Plants are healthy, well branched, about two feet high and carry an enormous load of fruit, often having the appearance of being bunched together. Flesh is thick, tender, mild and sweet, and is unexcelled for salad or stuffed as mangoes. They can be sliced and eaten like tomatoes. When ripe the Peppers are a rich, glossy scarlet, making them of unusually fine appearance.

**1182. Giant Crimson.** Very large, ripen earlier than other large sorts and are heavier as the flesh is unusually thick. Color of fruit, deep green when young, deep crimson when matured. Flavor is mild.

**1185. Golden Dawn.** Similar to the Large Bell or Bull Nose, excepting that it is of golden yellow color, and of very sweet and delicate flavor.

**1190. Large Bell or Bull Nose.** A large, early, bright red variety, mild in flavor. Desirable for pickling and mangoes when green.

**1200. Long Red Cayenne.** A late variety. Pods are small, bright scarlet, cone shaped and pungent. Are as much used for pickling when green as when ripe.

**1202. Neapolitan.** A standard market sort on account of its earliness and productiveness. It is 2 weeks ahead of Bull Nose. The large fruits are light green with thick, mild flesh. As they ripen they turn red.

**1203. Pimiento.** Fruit large, smooth and glossy. Deep green when young, becoming deep scarlet. Flesh thick, solid, mild, and sweet in flavor.

**1205. Red Cherry.** Fruit cherry shaped, small, round, bright red. Largely used for pickles.

**1210. Red Chili.** Fruit is small, bright red, very hot and pungent. Plants are very productive. Generally used for making Pepper sauce.

**1225. Ruby King.** The most popular large fruited Pepper. Very prolific. The pods are a beautiful bright red, 5 to 6 inches long by 3 to 4 inches in diameter. Flesh exceedingly thick, sweet, and so mild that it is often sliced as a salad. Splendid for stuffing as mangoes.

**1230. Sweet Mountain.** Similar to Bull Nose, though usually larger in size and longer, of very mild flavor. Much used for mangoes.

**1232. Sweet Upright.** Fruits are borne stiffly erect. The color when ripe is glowing scarlet both in the tender skin and thick sweet flesh.

## PUMPKIN



**1235. Northrup, King & Co.'s Mammoth Prize.** The largest pumpkin grown. Has weighed as high as 225 pounds. A prize winner. The flesh is fine grained and the quality is excellent. The flesh and skin are of a bright, golden yellow color. Notwithstanding its large size it is a fine variety for pies and is a splendid keeper.

**1240. Connecticut Field.** An immensely productive, large, orange-colored, field Pumpkin, usually grown for stock feeding, but it also makes good pies.

**1250. Japanese Pie.** A crook neck variety. Early. Seeds are marked very curiously. Flesh deep yellow, of fine quality. Keeps well.

**1255. Large Cheese or Kentucky Field.** Large, round, flattened, hardy and productive. About two feet in diameter. A fine keeper. Thick flesh of extra fine quality. A fine sort for family and market use. It is also grown quite extensively for stock feeding.

**1237 Winter Luxury.** A splendid pie Pumpkin, small, round, finely netted and beautiful golden-russet. The flesh is thick, sweet, tender, of fine flavor, and deep golden in color. The vines are healthy and productive and the Pumpkins keep well during the Winter.

**1245. Early Sugar or Pie Pumpkin.** Small, round, flattened, prolific, deep orange yellow. Flesh fine grained, sweet and of finest quality. A good keeper. One of the best for pies.

**Pumpkin Culture.** For seed sown with corn, plant only one row in five, which, when the vines begin to run, may be omitted in cultivation and thus the plants will not be injured. Use a dibber and plant three to five seeds in every third hill of corn. Plant as a single crop in hills eight feet apart eachway. Cultivate with a section of the harrow. Use paris green and land plaster or wood ashes to control the striped squash bugs. When well established thin to four plants in each hill. One oz. of seed will make 25 hills; 4lbs. seed required for an acre.

## NORTHROP, KING & CO.'S SEED POTATOES

The seed Potatoes we send out are seed Potatoes in every sense that the word Seed should imply. They are not only the best we can supply, but we try to have them the best to be had from any source at any price. To that end they will be hand sorted, selected stock such as anyone will be proud to plant.

### Our Potatoes Are Grown in the Far North.

Our stock is grown largely in the Red River Valley of North Dakota. "Red River" stock always commands a premium over Potatoes produced elsewhere. No seed Potatoes can be compared with those produced in the North, either for vigor and freedom from disease, or for producing and long keeping qualities.

Our seed stock is carefully selected for an oval shape and medium size; tubers somewhat flattened and a trifle tapering, with stem end slightly hollowed. Our Seed Potatoes are run over a grader and meet all the requirements of government inspection.

Our seed is clean and healthy and in order that the product may be equally scabless, we urge customers to treat the seed they plant with Formaldehyde, or Pyrox as the soil may be infected.

Northrup, King & Co.'s

### Extra Early Ohio Potatoes.

#### Our Own Special Stock.

We consider these to be the earliest, purest and altogether the handsomest stock of Early Ohio Potatoes that the season affords. On these points we challenge comparison with stock from any other source. Many earloads are shipped annually from the Red River Valley to Texas, Illinois, Iowa and other central and Southern states. Experienced growers have learned that it pays well to procure this stock.

The Early Ohio Potato is so well and generally known as to require no extended description. We believe it to be more popular than any other variety, which fact is evidenced by the very large demand we have for it. They can be depended upon to give a uniformly good yield under almost all conditions and soils and produce tubers of an ideal size.

Notwithstanding its earliness, this Potato keeps well. Our stock in the Spring is as sound as a dollar.

This Potato is characterized by pink skin, shallow eyes and blunt ends.

**Early Triumph.** (BLISS.) This variety was introduced many years ago by Mr. B. K. Bliss. The Triumph attained at that time no particular favor, but all of a sudden its virtues became appreciated and the demand for it was so great that it sold readily in earload lots for three times the price of ordinary seed Potatoes. There is good reason why the Triumph should be popular. It is from seven to ten days earlier than the Ohio, and that often means a difference of many dollars in the crop. This variety has long supplied the bulk of new Potatoes for the Spring market throughout most of the United States. Its reddish skin shows bruises but little so it can be shipped before it is fully ripe. The Potato is medium to small, squared at the ends. Skin is red, flesh is very white and firm. It is productive, and for several years to come will probably command a higher price among Potato buyers than any other sort.

### Culture.

Our Potato Booklet gives complete cultural directions and many valuable hints regarding the crop. It will be useful to every Potato grower. A copy will be furnished free with Potato orders upon request, or furnished to dealers for distribution at  $2\frac{1}{2}$ ¢ per copy.

**Prices.** Owing to the fluctuating market and the impossibility of accurately estimating future values at the time of going to press, we are listing no prices in this catalogue. Price lists are issued at frequent intervals during the season, and the many dealers who sell our seed potatoes are kept informed as to values. We believe it would be wise to order early, not only to secure the advantage of the early price, but to avoid also the possibility of varieties becoming sold out later.

### Irish Cobbler.

For years this was the leading early variety of Maine, from where it spread south and west. It is a trifle earlier than the Early Ohio but under some conditions will make a heavier crop.

The tubers are round, somewhat flattened with rather deep eyes and are medium to large in size. The skin is smooth, finely netted, and white in color. Flesh white, of fine quality and flavor.

This is a very vigorous grower, far less liable to knot and crack than many varieties and is nearly immune to the internal brown spot that affects some other sorts. It is a splendid shipper.

**Rose.** This variety has been a great favorite for many years on all markets and many growers still claim that it has never been excelled in quality and productiveness. Potatoes are long in shape, good size and light pink in color at the bud end. They cook mealy and are of the finest flavor.

### Burbank. A Standard Late Variety.

Continues in good demand and is more largely used than any other. It is of good size, of fine form and an excellent yielder. The flesh is white, very mealy and of fine flavor and quality. A fine Potato for baking. This variety is well adapted to light soils.

### Carman. The Best Main Crop Potato.

The Carman is already rivaling in popularity the Burbank, and is undoubtedly a much better Potato. Without any exception whatever it is the greatest yielding Potato ever introduced. The tubers are borne very close to the plant, a single turn of the fork turning out every Potato. It is of a large size and of the shapeliest form. Eyes are few and shallow. It is a perfect keeper, and is not surpassed as a table variety. Skin and flesh of extreme whiteness. It rarely has a hollow heart or dark parts. We recommend this Potato to our customers as being undoubtedly the best of all late sorts.

**Rural New Yorker.** Originated by the late Elbert C. Carman, and a very distinct and valuable main crop sort. The tubers attain a large size and are of round oval shape. The eyes are few, distinct and shallow. It is a very healthy and vigorous variety.





# RADISH

## The Secret of Growing Good Radishes

The secret of growing good radishes consists chiefly in the observance, on the part of the grower, of three points. First, they should be grown on light quick soil. Second, they should be given plenty of water, and last, but not by any means least, the right kind of seed should be sown. Radishes grow very quickly and if not supplied with sufficient moisture are likely to be pithy.

Sow seed  $\frac{1}{2}$  inch deep in the early Spring in rows 1 foot apart and the more fertile the soil the faster they will grow. For a succession, sow every 10 days throughout the season and stir the soil sufficiently to keep out weeds.

One oz. of seed required for 100 ft. of row; 8 to 10 lbs. of seed will plant one acre.

## EARLY ROUND RADISHES.

Northrup, King & Co.'s

### 1405. Sterling White Tip Radish.



After several years' experience in growing many strains of White Tip Radish we gave this particular sort the name "Sterling," because of its fine shape, its uniformity, its handsome appearance, its solidity, its superiority in every respect to all other strains of this type of Radish. It is very early and equally desirable for outdoor culture and forcing under glass. When placed on the table it is of particularly fine appearance. In flavor, no other Radish excels it, being crisp, sweet, mild and delicate, all that may be desired in a radish.

### 1410. Early Deep Scarlet or Non Plus Ultra, Forcing.

This variety has as small a top and is as early as any in cultivation, making it one of the best for forcing under glass. Roots ready to pull may be had in three weeks and they remain fit for use longer than any other early variety. They are small, globular, smooth, very deep red in color; flesh is white, crisp, tender and mild in flavor. May be planted very closely owing to their small tops.

### 1418. Early Scarlet Globe.

A selected forcing strain especially adapted for greenhouse and hot bed culture, but may be grown outdoors also with the best results. The shape is a little longer than round and the color, which it holds long after pulling, is very brilliant and attractive. Has a small top and is very early, being fit to pull as soon as Non Plus Ultra, but is much larger when matured. The flesh is white and tender making it desirable for gardeners whose markets demand a large first early radish.

### 1419. Early Scarlet Turnip.

Round, red, turnip-shaped. Grows quickly. Rich scarlet-red color, flesh white, crisp and tender. Very popular for early outdoor planting

### 1420. Early Scarlet Turnip, White Tipped.

Practically the same as the Rosy Gem, except that it is not quite so early but is used mostly for outdoor culture.

### 1425. Early White Box.

Similar to the White Turnip, but attains larger size.

### 1430. Early White Turnip.

A medium sized round variety, grown very largely for summer use. Has a small top and pure white skin. The flesh is waxy, mild and crisp. While generally used for outdoor culture, this makes a good variety for forcing. It takes about 30 days to mature and remains fit for use a long time.

### 1435. Rosy Gem.

We have a very clean and beautiful strain of this popular sort. It is extremely early, maturing in 25 days, and is largely used for growing both under glass and outdoors. It is round, bright scarlet and has a handsome white tip.

### 1440. Ruby Pearl.

A small turnip-shaped, bright red Radish with a pure white tip which includes the tap-root. This variety is more brightly colored than the Scarlet Turnip, White Tipped and will soon rival it in popularity.

### 1445. Sparkler.

White tipped Radishes are justly popular by reason of their attractive appearance, but the varieties already in existence are either too dull in the ground color or lack a clearly defined white tip.

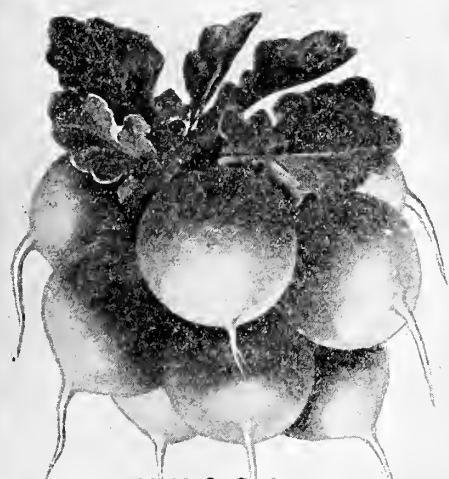
This quite distinct variety fulfills every requirement in each respect, the color being a rich carmine scarlet with a very pronounced tip of the purest white. The roots even when fully developed are solid, crisp and sweet, and remain fit for use as long as the coarser kinds. It is equally well adapted for forcing in frames or growing in the open ground, for while the leaves are small, they are sufficiently large for bunching.

### 1450. Triumph Radish.

This is a decidedly unique novelty in Radishes. It is very early, maturing about twenty days from the time of sowing. It is globe-shaped; the tops are short, which makes it valuable for growing under glass. The flesh is very crisp, solid and of mild flavor. The ground color is pure white, striped horizontally with bright scarlet.

### 1455. Yellow Ball.

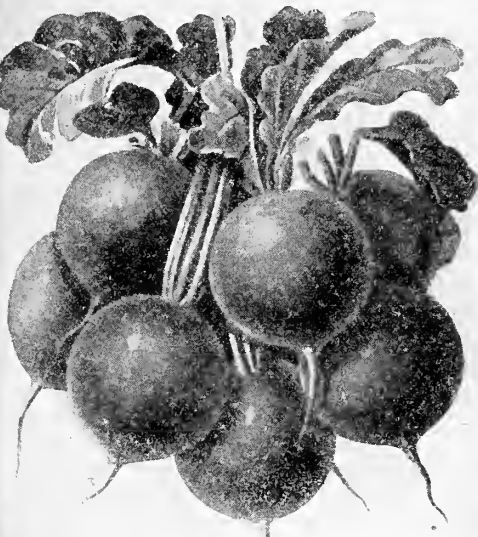
or Summer. A fine summer variety, of quick growth, producing crisp, tender Radishes even in the hottest weather and for that reason is grown extensively in the South. Roots are uniformly globe-shaped; skin is golden yellow in color and flesh is mild in flavor.



N.K. & Co's  
Sterling White Tip.



N.K. & Co's  
Special French Breakfast



Early Deep Scarlet Turnip.

## RADISH

### EARLY OLIVE SHAPED RADISHES.

#### 1460. Early Scarlet Olive.

A very useful variety. Matures in 25 days; color, bright scarlet; flesh, crisp and tender. Best adapted for main crop.

#### 1462. Northrup, King & Co.'s Special French Breakfast.



Of all the large number of different strains of Radishes grown in this locality this past season, none surpassed in fine quality or appearance, this new variety. It is oblong in shape, has a bright scarlet top and pure white tip. It matures quickly and is sweet, crisp, solid and tender. When offered for sale it quickly attracts the buyer's attention.

#### 1465. French Breakfast. Regular Strain.

A great favorite. Beautiful, bright scarlet, with pure white tip. Oblong in shape, medium size, makes rapid growth. It is a fine table variety on account of its excellent quality and attractive appearance. Fine for open ground or forcing.

#### 1470. White Olive Shaped.

Flesh mild and firm. Of very fine quality.

### LONG RADISHES.

#### 1475. Chartier or Shepherd.

The largest and handsomest summer sort. This variety is ready for the table very early and remains hard and crisp until it reaches a diameter of about an inch and a quarter, thus furnishing good roots for a long time. The color at the top is of a vivid crimson, fading gradually to pure white at the tip. Is delicious in flavor, resists drought effectually.

#### 1480. Glass or Cincinnati Market.

In appearance this Radish is entirely unique. It is very early, splendid for forcing or open ground. The tops are very small and they may stand close in the row. They grow straight and smooth, from six to seven inches long. The flesh is very tender, crisp and delicious. This is a handsome variety, bright red in color, and remains in good condition for several days.

#### 1482. Long Cardinal.

A very early variety, fit for use in about 25 days from sowing. It is of a bright red color with white tip. It is especially valuable because of its crisp, tender flesh and fine appearance. It is smooth and uniform and highly colored; the contrast of brightest cardinal with the white tip is both inviting and appetizing. Being early it is very profitable for marketing.

#### 1490. Long White or Lady Finger.

Pure white in color, of long tapering shape, very attractive in appearance, sweet, mild and delicious. Matures in 25 days.

#### 1495. White Icicle.

The finest of the early, pure white varieties. Planted in the spring the radishes are ready for pulling in about three weeks from sowing the seed. They are long and slender and clear, pure white, making them very attractive when on sale and on the table. It is crisp and tender both when young and until it attains larger size, thus remaining in condition for use for considerable time.

#### 1485. Long Scarlet Short Top.

A standard popular sort. Grows to six inches in length, matures in 25 days and can be used before it is fully grown. The roots grow half out of the ground, are very uniform in shape, smooth and very bright red in color. It remains crisp and tender until fully grown. Excellent either for the market or private garden.

#### 1500. Large White Summer.

A large, medium long sort, with heavy shoulders tapering gradually to base. Flesh and skin pure white. Solid, fine quality. Resists drought.

#### 1505. Wood's Early Frame.

An improvement on Long Scarlet. Largely used for forcing and a very popular variety with those who know it. Our stock is fine.

### WINTER RADISHES.

The merits of Winter Radishes are little appreciated, probably because they are seldom grown and few people have knowledge of their worth. These grow to large size and keep well for winter and spring use. Sow seed in the middle of June. Include some of these in your order.

#### 1510. California Mammoth White.

Pure white, about one foot long and two or three inches through, tapering regularly to tip. The flesh is tender and crisp, keeping well through the winter.

#### 1515. China Rose.

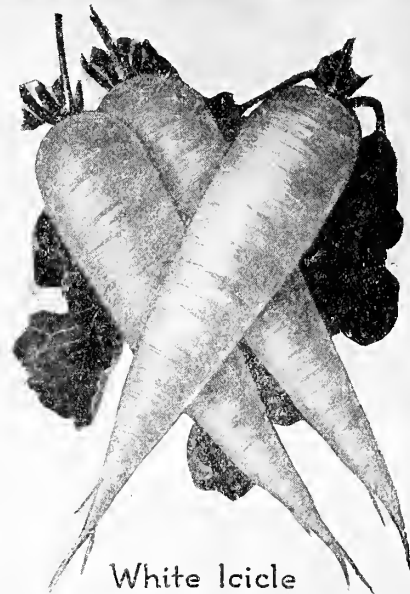
Bright rose color, flesh firm and piquant, cylindrical, or largest at the bottom, tapering abruptly to small top. One of the best for winter use.

#### 1520. Long Black Spanish.

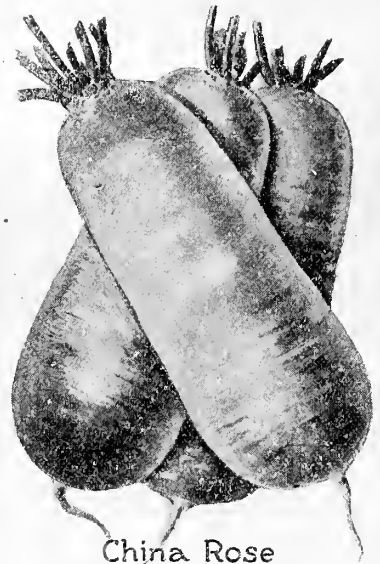
One of the largest, latest as well as the hardiest of Radishes. Roots of medium size, oblong, black, and flesh is of firm texture.

#### 1525. Round Black Spanish.

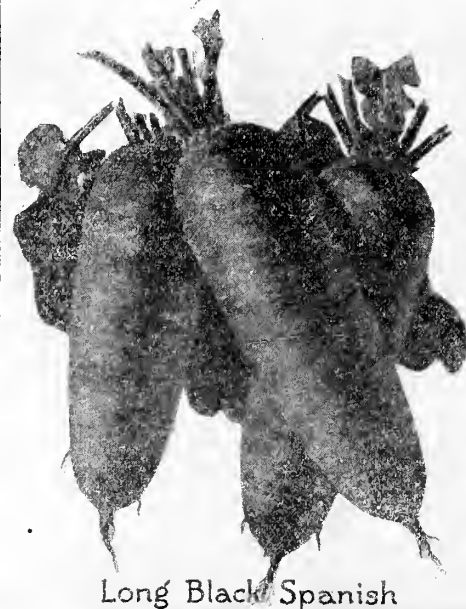
Roots round, sometimes top-shaped, three or four inches in diameter; skin black; flesh white. Fine for winter use as the roots keep a long time.



White Icicle



China Rose



Long Black Spanish

## RHUBARB SEED

**Culture.** Sow the seed in cold frame in the Spring and as soon as the plants are large enough transplant into rows 1 foot apart each way and cultivate. The following Spring, plant out in rows 5 feet apart each way and each Spring work into the soil a liberal supply of decomposed stable manure. Rhubarb roots are set out and cultivated as the above and this method gives edible Rhubarb in a very short time.

One oz. of seed will sow 75 ft. of row.

- 1538. Rhubarb Seed.** Vigorous and productive. The leaf stalks are very numerous, the longer ones being from 15 to 20 inches in length, and fully  $1\frac{1}{2}$  inches wide.

**1540. Strawberry Rhubarb.** A delicious variety, yielding heavy crops of light crimson stems which are a beautiful strawberry color when cooked.

## Rhubarb Roots

The planting of Rhubarb Roots is usually more satisfactory than to attempt to start from seed. Both time and labor are saved where the former method is followed. Roots such as we furnish should be set into well enriched soil at least five feet apart each way. The stalks should not be pulled the first season. The blossom stalks, however, should always be cut back so as not to exhaust the plant by going to seed. Strong Divisions,

## SALSIFY or Vegetable Oyster

**Culture.** Soil, seeding, culture and storing same as for parsnip. One oz. of seed will sow 60 ft. of row; 10 lbs. of seed required for an acre.

- 1550. Long White French.** The variety most commonly cultivated and considered the best in flavor. The roots are long, white, smooth and when properly cooked form a good substitute for oysters, which they resemble very much in taste.

**1555. Sandwich Island.** Grows uniformly extra large, averaging fully double the size and weight of the roots of the old variety. Of very superior quality and delicate flavor.

## SPINACH

**Culture.** For early spring use, sow seed in August in very fertile soil rich in humus. Upon approach of cold weather, cover the plants with 3 inches of straw. In the Spring, when dry, remove the litter and the plants will be ready for use in a short time. Sow the seed 1 inch deep in rows a foot apart. For a succession, sow again early in the Spring, and every two weeks thereafter. Keep surface soil cultivated lightly. One oz. will sow 100 ft. of row; 10 to 12 lbs. seed required for an acre.

- 1565. Bloomsdale or Savoy Leaved.** This is the earliest variety. Plant is of upright growth, with narrow, pointed, crinkled leaves. Is very hardy.

**1595. Round Thick Leaved.** A rapid growing variety forming clusters of large, very thick, slightly wrinkled leaves. A favorite with market gardeners.

**1572. Long Season.** An excellent sort, having very dark green, tender, crumpled leaves. It will stand an exceptionally long time without running to seed, and remain in good condition. One of the very best varieties for early spring and successional summer planting.

**1575. Long Standing.** This excellent variety comes quickly to maturity and remains in condition for use much longer than other sorts. The leaves are smooth and very dark, rich green. In our estimation the best for the private garden, as it is one of the most popular and profitable with market gardeners.

**1580. Long Standing Prickly.** A little later than the leafy sorts, but yields a large quantity of thick and finely colored leaves. It remains in condition fit for use for a long time. Seed is prickly.

**1570. Munsterland Frost Resisting.** A hardy winter Spinach, standing considerable frost. The hardiest of all varieties. Especially adapted for planting in August and very early September.

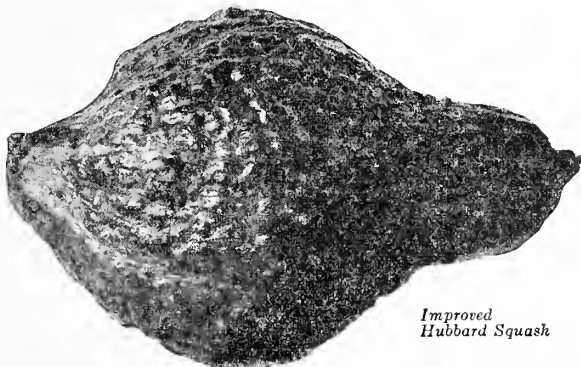
**1590. Prickly Winter.** A very hardy variety and will withstand severe weather especially well. It is a sort used largely for fall sowing.

**1585. New Zealand.** The stems and leaves are soft, thick, fleshy and crystalline in appearance. When started early in the Spring, the plants will resist heat and make strong growth during the Summer.

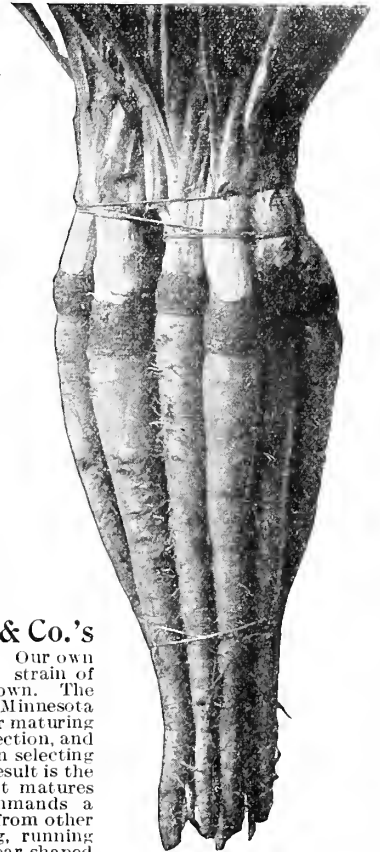
## SQUASH WINTER VARIETIES.

**Culture.** Plant seed in extra fertile soil in the Spring as soon as danger of frost is past. The vining varieties should be planted in hills 8 or 10 feet apart each way, and the bush varieties from 4 to 5 feet. Place 10 seeds in a hill and cover with an inch of soil. When the plants are well started thin out and cultivate.

One oz. of seed required for 25 hills. For running varieties,  $3\frac{1}{2}$  to 4 lbs. seed required per acre. Bush varieties require 6 lbs. of seed per acre.



Improved  
Hubbard Squash



Salsify.

## 1605. Northrup, King & Co.'s Improved Hubbard.

Our own strain of Hubbard Squash is the finest grown. The soil and climatic conditions of Minnesota are better adapted to the proper maturing of Squash seed than any other section, and as we have taken special care in selecting and improving our strain, the result is the very highest type known. It matures earlier, keeps better and commands a higher price than that grown from other seed. The vines are of strong, running growth and bear many large, pear-shaped fruits. Flesh is a bright orange-yellow, fine-grained, very dry, sweet and rich flavored.

## 1600. Mammoth Chili.

**Weigh up to 100 lbs. Immensely Profitable. Very Productive.** Attains an enormous size, often reaching a weight of 75 pounds, and not infrequently weighs 100 pounds. Despite its size, its flesh is rich and fine flavored. It is especially desirable for stock feeding and exhibition purposes. For feeding cows it is best to cut them up, mixing with ground feed. As the yield an acre will run from 8 to 15 tons it will thus produce a very cheap and nutritious feed. In feeding to swine, all that is necessary is to break the Squashes open and the swine will help themselves.

**1610. Boston Marrow.** A large fruited, hard shelled, winter sort, with bright orange skin and deep orange flesh. Vine of strong, running growth and very productive; fruits oval.

**1615. Chicago Warty Hubbard.** Is similar in size and quality to the Hubbard. The vines are vigorous and productive, while the large, dark olive-green fruits are rather more heavily warted. An excellent keeper and of splendid quality.

**1620. Gregory's Delicious.** In dryness, sweetness and richness of flavor, surpasses all other Squashes. The shell is green in color, the flesh a rich orange. An excellent winter keeper.

**1625. Red or "Golden" Hubbard.** This is identical in size, form and fruitfulness with the Chicago Warty Hubbard; the chief distinction being that the heavily warted skin is of a rich orange-yellow turning to a deep salmon-red when ripened. It is of fine quality.

**1628. Table Queen or Des Moines.** Introduced under the name of "Table Queen." Name changed at the request of Des Moines Market Gardeners Association. Vines are vigorous and very productive. Just the right size, averaging about 6 to 8 inches in diameter. Color dark green, with sometimes a blotch of red at pointed end. Shell is hard and smooth, and ridged. Just wash it clean, cut in half, take out the seeds, bake 20 minutes and you will have the nicest squash you ever tasted. Splendid for pies. Ripens in the fall and keeps as long as Hubbard.

## SUMMER VARIETIES.

**1635. Golden Summer Crook Neck.** Early and prolific. The fruits are of the true crook-neck type, heavily warted, and of light golden color; about one foot long.

**1640. White Bush Scallop.** (Patty Pan.) Matures early and will bear throughout the season if fruits are kept gathered. Squashes are clear white and of large size. Flesh is thick and of very fine quality.

**1645. Yellow Bush Scallop.** A very early, large flat variety, color, yellow; flesh pale yellow, fine flavor; very small seed cavity.

**1647. Vegetable Marrow.** Long White Bush. A very popular sort abroad and can be raised equally well here. Is long and slim, color white, with delicious white flesh.



# TOMATO

1/4 lb. seed produces plants for 1 acre, 1 oz. makes 1500 plants.



## 1650. Northrup, King & Co.'s Sterling.

This is an early, large and perfectly smooth Tomato of perfect flavor, very solid, and strikingly attractive in general appearance. In color it is a glossy crimson, tinged with pinkish purple. It is enormously productive, one plant alone having been known to produce nearly a bushel of ripe fruit. In addition to its earliness it continues to produce ripe fruit until frost. It is, we think, the best of all Tomatoes for family use and is unsurpassed as a money maker for the market gardener.

**1660. Acme.** Early and bears fruit until cut off by frost. Fruit is purplish, always round, smooth and of good size, and is borne in clusters of four or five; free from cracks and stands shipment well. Flesh is solid and of excellent flavor. Does well both outdoors and under glass. This is a good canning variety.

**1665. Beauty.** (Livingston's.) One of the smoothest skinned and best of the large sorts. The vines are large, vigorous and very productive. The fruit is large, uniform in size and very smooth. Skin purplish pink, flesh light pink and of excellent flavor.

**1725. Chalk's Early Jewel.** The largest, smoothest and finest flavored, extra early bright red Tomato. About ten days later than Spark's Earliana. It is a heavier cropper, with Tomatoes of larger size and sweeter flavor, produced throughout the season. The Tomatoes are of good size, just right for market; very solid and deep through, almost round; color bright scarlet, ripening to the stem without cracks or green core. Flesh is thick, solid, of fine flavor, with few seeds; the skin is strong enough to make it a good shipping variety.

**1675. Dwarf Champion.** Dwarf and compact in habit; sold by some seedsmen as the Tree Tomato. Stands up well even when loaded with fruit, having a stiff, bushy stem; can be planted close together; very desirable in small gardens; early. It is always smooth and attractive; the skin is tough and flesh solid, but has no hard core and is of good flavor.

Northrup, King & Co.'s

## 1720. Early Minnesota Tomato. The Earliest Good Tomato.



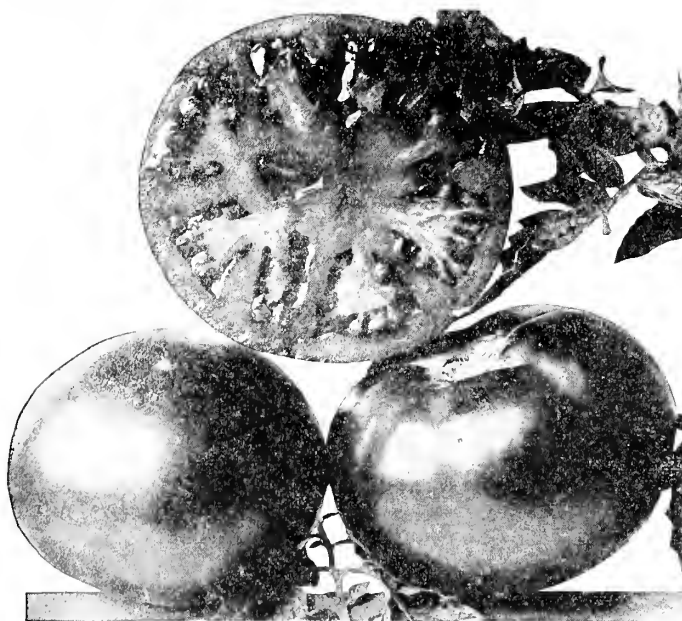
Our stock of this splendid Tomato has come in competition in the race for earliness with numerous other varieties sent out under strong claims, and has beaten them all, and remains today, as it was when we first offered it several years ago, the earliest of all the good varieties, very hardy and succeeding everywhere. The Imperial, Early Ruby and Earliana are excellent sorts but the Early Minnesota is superior to these in shapeliness, color, size, smoothness, solidity and flavor, as well as being earlier. When we say the earliest Tomato, we of course mean the earliest good Tomato. There are several sorts a very little earlier, but they are gnarled, ridged, small, tasteless and unworthy the name of Tomato, and unfit for use. Those wishing the earliest good Tomato must have our Early Minnesota.

**1685. Favorite.** (Livingston's.) Large, smooth, blood-red sort; early; ripens all over and through at once. Will bear shipping long distances. Very few seeds and has no hard, green core.

**1692. Golden Queen.** A very handsome yellow Tomato of large size, solid and smooth; very productive.

**1728. June Pink.** One of the earliest varieties of Tomatoes and a special favorite with those who like the pink color. The fruit is borne in clusters and begins to ripen very early. The Tomatoes average three inches in diameter and are of excellent quality. The yield is heavy and continuous until the vines are cut down by frost.

**1733. John Baer.** This variety is the result of fifteen generations of breeding; it produces perfect, solid, high crown, brilliant red Tomatoes; splendid for shipping. They ripen ten days before Earliana, bearing 50 to 100 fruits per plant. The flavor is deliciously sweet. The plant will stand plenty of fertilizer without going to vine.



Dwarf Champion Tomato.



Northrup, King & Co.'s Sterling Tomato.

**1700. Livingston's Globe.** Perfectly globe-shaped, very early, smooth, has few seeds, firm fleshed, ripens evenly; rose-colored tinged with purple, very productive; an excellent keeper, flavor superb. A fine variety for greenhouse or for early outdoor growing.

**1705. Perfection.** (Livingston's.) One of the handsomest varieties and those who have grown the large, round, smooth, beautiful, red fruit claim it is of superior quality.

**1715. Ponderosa.** This is the largest fruited Tomato and is of a fine quality for slicing. The vines are of strong growth; fruits oblong in form, deep through, and generally ridged or ribbed; deep purple in color. They are solidly fleshy with small seed cells; of fine flavor. Planted in good soil, fruits frequently attain a weight of one pound or more.

**1730. Spark's Earliana.** A perfect early Tomato, large in size and prodigious bearer, yielding its splendid fruit until frost.

**1732. Earliana Select.** Seed saved from crown and selected fruit.

**1734. Earliana Private Stock.** Quantity very limited. A superior stock saved from fine breeding plots, the result of many years' selection.

**1710. Stone.** This variety is very large and of a bright scarlet color; very smooth, ripening evenly to the stem without a crack, exceedingly solid; is an excellent shipper; quality the very best; fine for canning; a good keeper; without hard core; not subject to rot; its vines and foliage rank and robust.

**1711. Dwarf Stone or Tree.** Vines dwarf but productive, medium to late in maturity. Fruit bright red, smooth and solid. The best large fruited dwarf variety.

**1712. Trucker's Favorite.** A purple variety of unusual merit. Its fine, smooth, uniformly shaped fruits command the highest market price. The fruits are thick meat and very solid; the meat is of the finest flavor, making them equally desirable for slicing, canning and cooking purposes. A basket of these Tomatoes is a most attractive sight and those offering them for sale will find the demand larger than the supply.

**1713. Trophy.** Very large, late or main crop variety. Fruit rich, deep crimson of excellent quality, smooth and of uniform size. Desirable for canning and slicing.

## SMALL FRUITED TOMATOES

**1735. Husk Tomato.** Makes fine Preserves. Also called Strawberry and Ground Cherry, is greatly valued for use as a preserve, it also makes delicious pies either when ripe or dried with sugar. The fruits are half an inch in diameter and of very sweet and agreeable flavor. They are closed in a husk or calyx. We consider the Golden Husk better than the Purple Husk variety and unless otherwise directed will always send Golden Husk on orders received for Strawberry, Ground Cherry or Husk Tomato.

**1740. Peach.** These are excellent for eating raw. The fruits resemble a peach, even to the skin which is covered with a slight bloom as in a peach or nectarine.

**1745. Red Cherry.** Identical with the Yellow Cherry except in color of fruit, which is of a light scarlet.

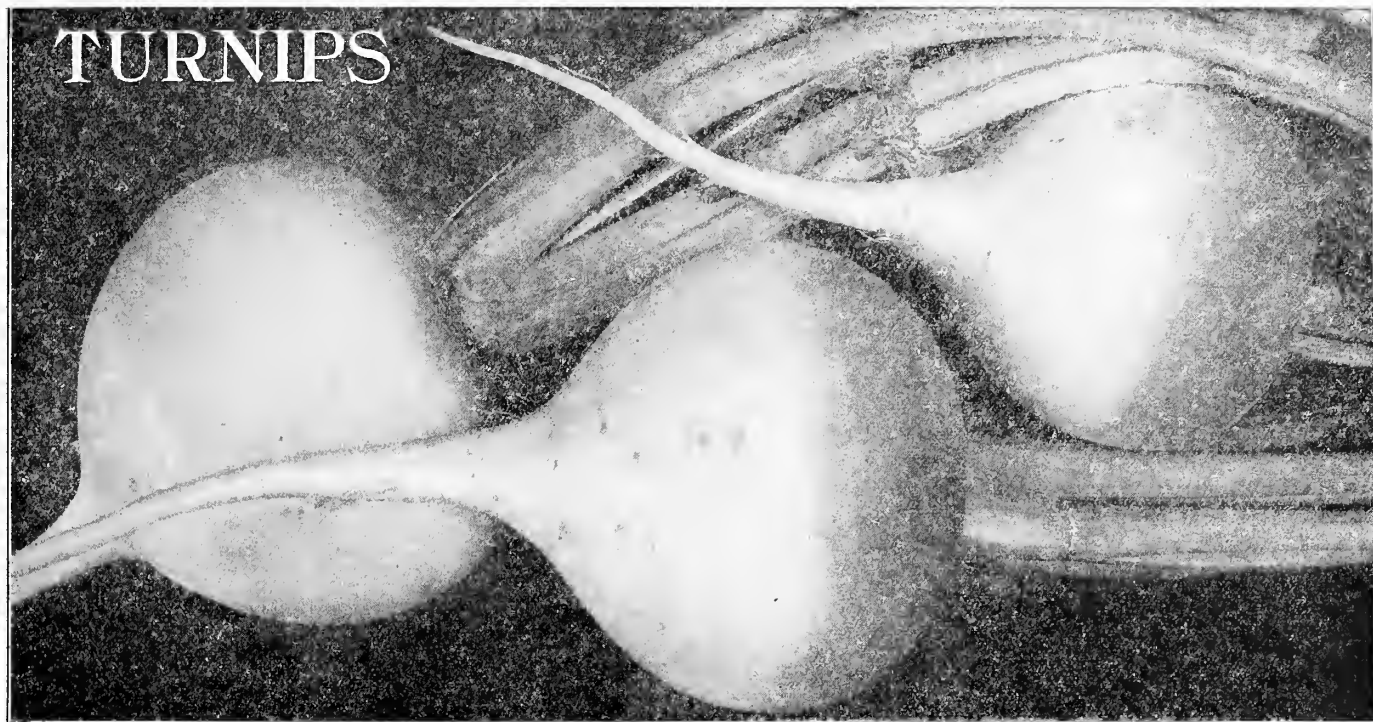
**1750. Red Pear.** Fruit pear-shaped, of bright scarlet color, rich flavor.

**1755. Yellow Cherry.** Fruits are of a light lemon-yellow, about half an inch in diameter, bears early and freely until frost.

**1760. Yellow Pear.** Similar to the Red Pear, but a handsome yellow.

**1765. Yellow Plum.** Fruits are yellow, plum-shaped, in clusters. Excellent.

# TURNIPS



White Globe Turnip.

**Culture.** Sow seed early in Spring for summer crop and early in August for late crop; 1 oz. of seed will sow 150 ft. of row; 1 to 2 lbs. per acre.

**1770. Northrup, King & Co.'s Early White Model.** Best for private gardens and home use. Very early and the most perfectly formed, round, white Turnip. It has a short top and a single tap root. Flesh, snowy white, solid and sweet.

**1775. Cow Horn.** Pure white, except a little shade of green at the top. Carrot shaped, grows nearly half out of the ground and slightly crooked. Delicate and well flavored; a rapid grower and good for market use.

**1780. Early White Flat Dutch.** A very popular sort for table or market; grows quickly, comes early; clear white skin, flesh juicy, mild flavor and excellent quality; bulbs free from small roots.

**1785. Extra Early Purple Top Milan.** Similar to the White Milan, except that the roots are a little more flat, and the upper portion is a beautiful purple-red.

**1790. Extra Early White Milan.** The earliest Turnip. Tops very small, distinctly strap-leaved and growing very erect and compact. Bulbs form earliest of any sort. The clean white roots are smooth, flat, symmetrical and handsome in appearance. The flesh is white, tender and sweet.

**1795. Golden Ball or Orange Jelly.** One of the most delicious and sweetest yellow-fleshed Turnips. Not of large size, but firm, hard and excellent flavor. Keeps well and is superior as a table variety.

**1800. Purple Top, Strap-Leaved.** The most popular favorite with all, and more largely grown than any other Turnip; will do well to sow either broadcast or in drills, and will form good sized bulbs in seven or eight weeks. Rather flat and of medium size. Color, purple above ground, white below; flesh, white, fine grained and tender.

**1805. Purple Top White Globe.** Of a perfect globe shape, about six inches in diameter, with smooth, white skin; flesh pure white, firm and crisp, and of quick growth. A good keeper and is fine for market.

**1810. White Egg.** A quick grower; a grand good keeper; excellent either as an early or late variety. The flesh is very sweet, firm and mild, never having the rank, strong taste of some varieties.

**1815. White Globe.** Perfectly globe-shaped; skin white and smooth; leaves, large and dark green. Flesh is white and of good quality.

**1816. Amber Globe Green Top.** A large, round variety with solid, yellow flesh. Fine for stock feeding and a good keeper. Excellent for table use, being very sweet.

**1817. Purple Top Yellow Aberdeen.** Of medium size, with yellow flesh of fine quality; matures late so should be sown early; keeps well and is a good variety for stock.

Purple Top White Globe Turnips.

## RUTA BAGA

Swedish Turnip.

1900. Northrup, King & Co.'s Prize Winner.



Northrup, King & Co.'s Prize Winner Ruta Baga is a purple top, yellow fleshed variety. The roots reach a good size and are exceedingly uniform in appearance. The Prize Winner is an all around Ruta Baga, suited to every purpose and every soil. We do not hesitate to say that in the Prize Winner we possess the handsomest and most productive stock of purple top Ruta Baga known. Valuable not only for stock feeding but for table use as well.

**1905. American Purple Top.** This strain is of American origin and is a purple top, yellow variety. It has been selected to produce a smaller top and a shorter neck than is usually found; the roots grow to a large size and are of the finest quality and excellent both for the table and for stock feeding.

**1910. Carter's Hardy Swede.** An excellent sort either for table use or stock feeding. Flesh, yellow, solid, firm, sweet and rich. It is a hardy variety and yields heavily.

**1915. Hurst's Monarch.** Distinct in type, being of tankard shape. On account of the size it attains, it will yield from two to seven tons more to the acre than any other variety.

**1923. Large White Sweet.** Excellent keeper. Desirable for table and stock. Roots, large, globe-shaped small neck, color white. Flesh, white, firm and sweet.

## HERBS

Utilize the corners for a few Pot and Sweet Herbs (for flavoring meats, soups, etc.) indispensable to every garden, while Medicinal Herbs will be found useful. Thrive nicely along sunny side of fence in a deep, rich soil.

**Culture.** These thrive best in a rich, mellow soil. Sow the seed early in Spring in shallow drills, one ft. apart; when up two or three inches thin out or transplant. Cut on a dry day before coming into full blossom, tie in bunches and hang up where they can dry quickly.

1818. Anise. Used for cordials, garnishing and flavoring.  
1820. Balm. Leaves used for making pleasant beverages.  
1825. Basil, Sweet. Leaves are used in soups, etc.  
1830. Borage. Leaves used for flavoring, and flowers furnish bee pasture.  
1835. Caraway. Grown for seeds; used for flavoring.  
1840. Catnip or Catmint. Leaves and young shoots used for seasoning.  
1845. Coriander. Seeds used in the manufacture of beverages, in confectionery and culinary preparations.

1850. Dill. Seeds have an aromatic odor and pungent taste.  
1855. Fennel, Sweet. Ornamental; also, used in sauce.  
1860. Horehound. Used for seasoning and cough remedy.  
1865. Lavender. An aromatic and useful medicinal herb.  
1870. Marjoram, Sweet. Leaves used for seasoning.  
1875. Pennyroyal. Agreeable odor and flavor.  
1880. Rosemary. The leaves of this plant are aromatic.  
1885. Sage. An indispensable herb for seasoning.  
1890. Summer Savory. Used for flavoring soups.  
1895. Thyme. Leaves and young shoots used for seasoning; a tea is made of the leaves; a remedy for headache.

## Beautiful American Asters

### Cultural Note on Asters.

The cultivation of the Aster is simple. Do not sow the seed too early; the middle of March indoors is considered a very good time. Successive sowings should be made, if a constant supply of flowers is desired from July until frost. For early use sow the seed in shallow boxes, covering with one-fourth inch of soil. Later sowings may be made in hotbeds or cold frames; or in the open ground, broadcast or in drills, when all danger of frost is past. Never use the same ground or location twice in succession. The soil should be rich and moist. We recommend pulverized sheep manure, wood ashes and phosphates as fertilizers. If barnyard manure is used it should be thoroughly decomposed. Allow plants plenty of room; rows should be 3 feet apart and 15 inches between the plants in the row, but the distance may be less according to the habit or growth of the variety.

The aster beetle or fly is one of the worst pests but there seems to be only one crop of them, and these if caught and killed are not usually followed by others. Dusting the plants with air slacked lime or dry ashes will be found beneficial. Root lice and cut worms are also troublesome. Applications of kerosene emulsion or tobacco water around the roots are effective. Aster blight or "yellows" can usually be traced to the work of the above pests.

The plants should be pulled and burned if they should become badly diseased. Growers should remember that prevention is better than cure. Good cultivation and the timely use of the remedies suggested should produce healthy, vigorous plants.

### 2031. Lavender Gem Aster.

One of the most beautiful Asters; color a charming shade of lavender, deepening with age. The flowers are always full double, borne in profusion on long, slender, wiry stems. Of the Ostrich Feather type, large, artistic and loosely arranged. Pkt., 15c.

### Queen of the Market.

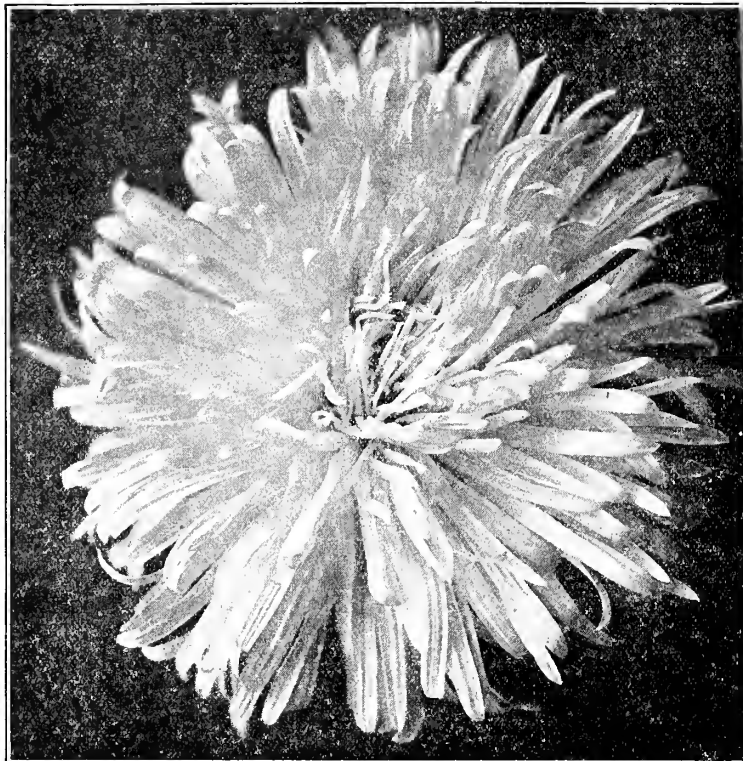
The earliest first-class Asters, coming into flower almost a month in advance of later sorts. The plants are of open habit, about 15 inches high, bearing on stems 10 to 15 inches long the finely formed double flowers. This is the standard variety among florists for early cutting.

2007. Crimson .....	pkt., 10c	2010. Lavender .....	pkt., 10c
2008. Flesh Pink .....	pkt., 10c	2011. Purple .....	pkt., 10c
2009. Rose Pink .....	pkt., 10c	2012. White .....	pkt., 10c
2013. Finest Mixed Colors .....	pkt., 10c		
2014. Collection of 1 pkt. each of the above 6 colors .....	50c		

### Rochester Giant Comet Asters.

This is a new class of Asters of which the plants are like those of the Late Branching, large and strong. The flowers like all the Comet type have petals that are very long, narrow and gracefully recurved, giving them a lightness and grace that makes them the most artistic of all Asters. The immense size of the flowers—they are the largest Asters now in cultivation—their artistic beauty, delicacy of coloring and freedom of bloom make them superior to almost all others. They bloom in mid-season.

2015. Lavender .....	pkt., 15c	2018. Rose Pink .....	pkt., 15c
2016. Purple .....	pkt., 15c	2019. White .....	pkt., 15c
2017. Light Pink .....	pkt., 15c	2020. Finest Mixed Colors .....	pkt., 15c
2021. Collection of 1 pkt. each of the above 5 colors .....	75c		



### Improved Crego Giant Comet Asters.

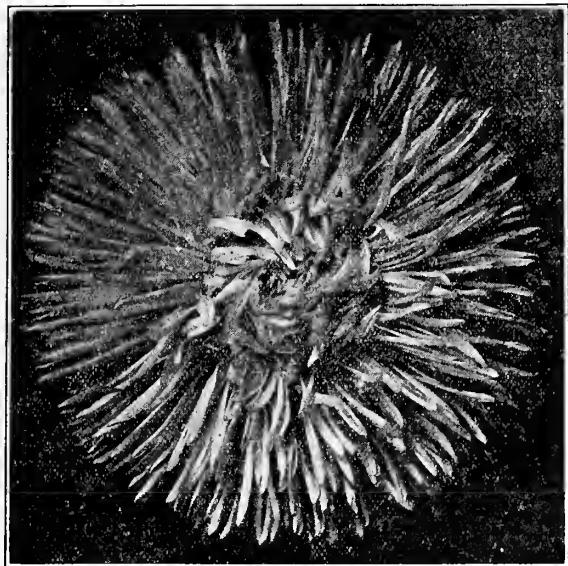
This Aster resembles the Chrysanthemum very much in form. It is usually large, being 3 to 5 inches in diameter when well grown. The petals are very large, twisted and curled so as to give the blossoms a beautiful, fluffy appearance. They keep in good condition extra well when cut. The plants, of luxuriant, branching growth, attain a height of 18 inches to 2 feet, each plant bearing from 20 to 30 magnificent flowers on very long stems. We offer these in 6 shades, each distinct and deserving cultivation.

2023. Azure Blue .....	pkt., 15c	2027. Shell Pink .....	pkt., 15c
2024. Lavender .....	pkt., 15c	2028. White .....	pkt., 15c
2025. Purple .....	pkt., 15c	2029. Finest Mixed Colors .....	pkt., 15c
2026. Rose Pink .....	pkt., 15c	2030. Collection of 1 pkt. each of the above 6 colors .....	75c



Magnificent Field of the Improved Crego Giant Comet Asters Grown for Seed Purposes.





### King Asters.

A magnificent class of Asters, distinct from others in the character of the flower. The long petals are folded lengthwise, appearing almost as if quilled. The flowers are of great size, full and large, of good substance and last very long when cut. The plants are large and the stems exceptionally long and strong.

**2049. Crimson King.** Very rich, deep crimson. A most striking and attractive variety for those who prefer this color. Pkt., 15c.

**2032. Pink King.** This is a beautiful and delicate lavender pink shade; it has the characteristic narrow petal of the class but the petals are not so closely folded as some of the others. This gives the flower a graceful, soft appearance. The plants are upright in growth. Pkt., 15c.

**2033. Rose King.** A very attractive Aster with large, handsome double-quilled flowers of a brilliant rose color. A great favorite among florists, lasting in perfect condition a long time. It is vigorous in habit, with stems frequently two feet long. Pkt., 15c.

**2034. Violet King.** The petals are twisted, curled and incurved in the center, completely covering the crown. The bloom is full and large; plants strong and free-branching. Season, mid-summer to frost; the color is a soft violet-lilac. Pkt., 15c.

**2035. White King.** This has the same handsome type of flower and upright growth of plant as the Violet King and makes a very pleasing contrast with that variety. The cut flowers have the splendid lasting quality characteristic of the King class. In season White King blossoms with the Late Branching and has all the vigor of that famous race. The plants are more upright in growth than the Violet King and Rose King. Pkt., 15c.

**2036. Finest Mixed King Asters.** Pkt., 15c.

**2037. Collection.** This includes one packet each of the above 5 colors; the 5 pkts., 60c.

### American Branching, Semple's or Vick's Branching

A grand, popular strain having all the characteristics of a good Aster.

The plants form strong, branching bushes 2 to 3 feet high, bearing on long, strong stems their handsome Chrysanthemum-like flowers averaging about 5 inches across. The form of the flowers and length of stem puts them in the front rank for cutting. They bloom late in the season.

<b>2038. Azure Blue.....</b> pkt., 10c	<b>2043. Mary Semple,</b>
<b>2039. Crimson.....</b> pkt., 10c	Shell Pink..... pkt., 10c
<b>2040. Dark Violet.....</b> pkt., 10c	<b>2044. Lavender.....</b> pkt., 10c
<b>2041. Rose Pink.....</b> pkt., 10c	<b>2045. Purple.....</b> pkt., 10c
<b>2042. Deep Rose.....</b>	<b>2046. White.....</b> pkt., 10c
Pink..... pkt., 10c	
<b>2047. Finest Semple Mixed Colors.....</b> pkt., 10c	
<b>2048. Collection of one pkt. each of the above 9 colors.....</b>	80c

### Asterum.

A strain of Comet Asters which on account of their immense size and Chrysanthemum-like appearance have been appropriately named Asterums. They attracted great attention when they were first exhibited a few years ago and have become increasingly popular ever since.

The plants grow about three feet high with strong stems and usually bloom a trifle earlier than the Crego Giant Comets. Few of the flowers are less than five inches in diameter.

<b>2050. Dark Lavender.....</b> pkt., 15c
<b>2051. New Shell Pink.....</b> pkt., 15c
<b>2052. Rose Pink.....</b> pkt., 15c
<b>2053. White.....</b> pkt., 15c
<b>2054. Finest Asterum Mixed Colors.....</b> pkt., 15c
<b>2055. Collection of 1 pkt. each of the above 4 colors.....</b>

### Improved American Victoria. The Daybreak Type.

These very desirable medium early Asters produce plants stiffly erect in habit of growth, which attain a height of 18 to 20 inches. The flowers form a ball about 2½ inches in diameter with regularly incurved petals, borne on long, stout stems.

<b>2060. Blue.....</b> pkt., 15c	<b>2065. Finest Daybreak Mixed</b>
<b>2061. Lavender.....</b> pkt., 15c	Colors..... pkt., 15c
<b>2062. Light Shell Pink.....</b> pkt., 15c	<b>2066. Collection of 1 pkt.</b>
<b>2063. Rose Pink.....</b> pkt., 15c	each of the above 5 colors.. 60c
<b>2064. Shell Pink.....</b> pkt., 15c	

### 2072. Red Aster "Sensation."

This is the reddest of all Red Asters, the color being a rich garnet or ox blood red which glistens in the sunshine like a live coal. The plants are of free-branching habit, about 18 inches high; the very double flowers, averaging 3½ inches across, are borne freely on stems a foot long from early Aug. till late Sept. The intense color shows up well when cut, and makes a brilliant bit of color in a bed or border. Pkt., 15c.

### 2073. Enchantress Pink Aster.

Immense flowers of a soft delicate pink which does not fade; borne in strong, upright plants. The plants are tall and strong and the flowers are the size of the largest Branching Asters. The flower is made up of broad petals, loosely arranged, producing an exceedingly soft and pleasing effect. Pkt., 25c.

**2074. Giant Purity.** Large, double flowers of purest snowy whiteness; mid-season. Pkt., 25c.

**2075. Pink Beauty.** This has been pronounced by experts to be the finest pink mid-season Aster. The bushy plants grow 24 to 30 inches high, and bear as many as 50 large chrysanthemum-like flowers of a delicate bluish-pink. Pkt., 15c.

**2076. Crimson Giant.** A superb, late branching Aster of upright growth. Flowers extra large, five inches or more across. Stems about 18 inches long, color rich blood crimson. Pkt., 15c.

**2078. Peerless Pink.** One of the finest, late branching Asters. Flowers are a rich shell pink, four or five inches across. Robust grower and free-flowering. Pkt., 15c.

### Peony Flowered Perfection Aster.

Has double, large and beautiful flowers with incurved petals, resembling very much a Peony in shape. The plants are strong and upright, bearing handsome blooms on long, stiff stems. Extra fine for bouquet work. Height, 20 inches.

<b>2080. Blue.....</b> pkt., 15c	<b>2082. Crimson.....</b> pkt., 15c
<b>2081. Snow White.....</b> pkt., 15c	<b>2083. Mixed Colors.....</b> pkt., 15c

### Royal Asters

These form a new class of Asters in which the petals are very broad and distinctly incurved or shell-shaped. This produces an effect of shading that enhances the beauty of the color. Charmingly graceful, producing a Chrysanthemum-like effect.

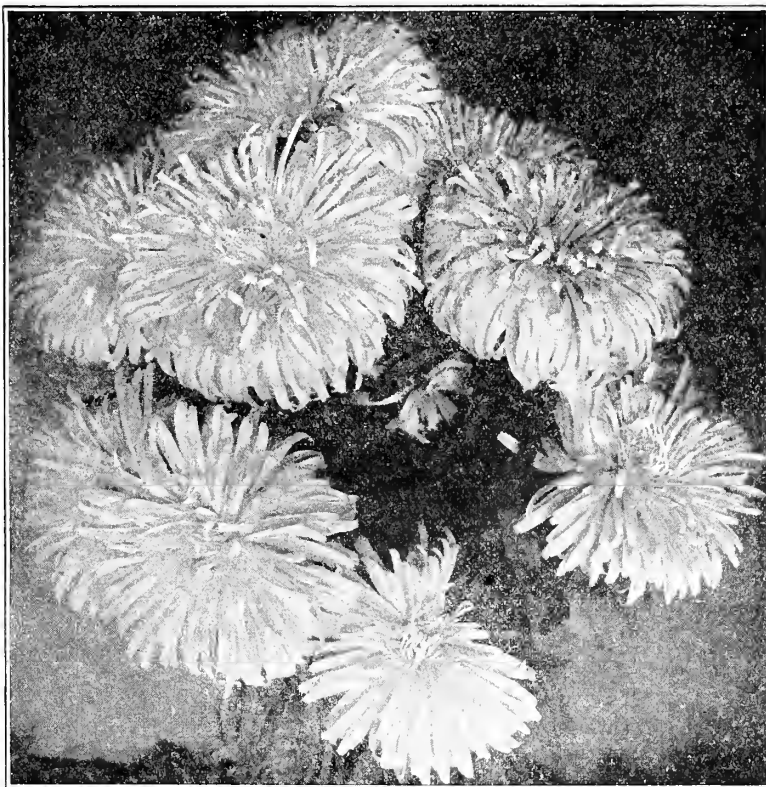
In size the flowers are like the Late Branching Asters and the plants have the same sturdy vigor but are not so tall, branching close to the ground. They are earlier than the Branching Type and remain in bloom a long time.

<b>2085. Lavender.....</b> pkt., 15c	<b>2088. Shell Pink.....</b> pkt., 15c
<b>2086. Purple.....</b> pkt., 15c	<b>2089. White.....</b> pkt., 15c
<b>2087. Rose Pink.....</b> pkt., 15c	<b>2090. Finest Mixed New Royal.....</b> pkt., 15c
<b>2091. Collection of 1 pkt. each of the above 5 colors.....</b>	60c

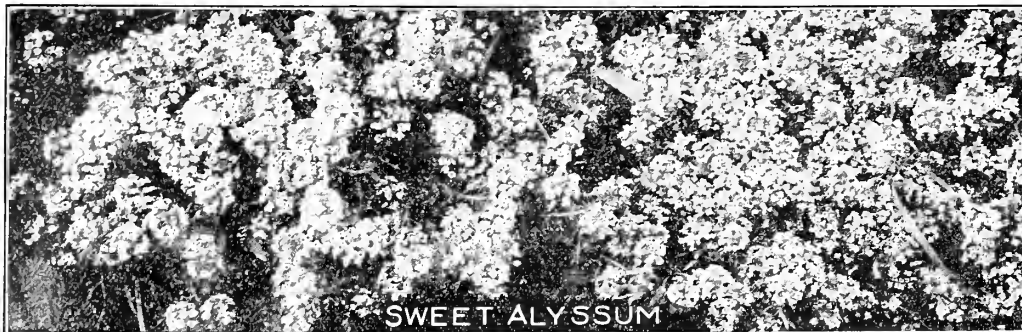
### Beauty Asters

A most valuable introduction on account of its late flowering, coming into bloom fully two weeks later than Late Branching, and furnishing high-grade cut flowers from early October until killing frost in November. The plants are unusually vigorous, from 2½ to 3 feet high. Perfectly double flowers, 4 to 5 inches across, extra long strong stems.

<b>2092 American Beauty, cerise-rose</b> pkt. 15c	<b>2094 Purple Beauty, deep purple</b> pkt. 15c
<b>2093 Lavender Beauty, soft lavender</b> pkt. 15c	<b>2095 September Beauty, shell-pink</b> pkt. 15c



Asterum



**2105. Abutilon.** Flowering Maple. These grow rapidly and make fine, large shrubs, bearing elegant bell-shaped flowers in great profusion. Pkt., 25c.

**2108. Adonis.** Showy annuals of easy culture, with pretty, fine cut foliage, dark crimson flowers with light center. 1 foot. Pkt., 10c.

**Ageratum.** One of the best bedding plants, being literally a sheet of bloom from early summer until frost. Unlike many bedding plants, their flowers are not liable to be spoiled by rain, nor do the colors fade out. The various blue varieties are without doubt the most satisfactory bedding plants of this color for our climate. Easily raised from seed, which is usually started in a hotbed or window and transferred to the open ground in May. Can also be sown outdoors in May. A sowing in September will give plants to bloom all winter.

**2110. Blue Perfection.** The darkest color of all large flowering Ageratums. Color deep amethyst-blue; compact growth; fine bedder.  $\frac{1}{4}$  oz., 40c; pkt., 10c.

**2111. Little Blue Star.** A variety of exceedingly dwarf and even growth; the tiny bushes, not over 4 to 5 inches high, are densely covered with bright blue flowers, a fine variety for edging. Pkt. 25c.

**2112. Princess.** A beautiful variety of compact, even growth, rarely exceeding 8 inches in height, the flowers are sky-blue with white center, the contrast being really exquisite.  $\frac{1}{4}$  oz., 40c; pkt., 10c.

**2113. Imperial Dwarf Blue.** A clear blue; growth about 8 inches high.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**2114. Imperial Dwarf White.** Growth about 8 inches high.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**Alyssum. Sweet.** A very pretty plant for beds, vases, baskets, edgings or rock work. Sweet scented and blooms profusely all summer.

**2115. White.** Oz., 50c; pkt., 5c.

**2116. Little Gem, or Carpet of Snow.** A very select strain, habit 2½ inches high and about 12 to 18 inches in diameter. The blooms are massed, completely hiding all foliage, and a field of this in bloom has the appearance of being covered with snow. It begins to bloom when quite small, and the plants are a solid mass of white from spring to late autumn, and undoubtedly the best white-flowering edging plant in the list. Oz., 75c;  $\frac{1}{4}$  oz., 25c; pkt., 10c.

**Amaranthus.** Brilliant foliaged annuals, growing from 3 to 5 ft. high. Very useful in borders of tall plants or for the centers of large beds. Give plants plenty of room.

**2118. Caudatus. LOVE LIES BLEEDING.** Brilliant blood red of drooping habit, 3 ft. Pkt., 5c.

**2120. Tricolor. JOSEPH'S COAT.** Leaves red, yellow and green. Pkt., 5c.

**2121. Salicifolius. FOUNTAIN PLANT.** Willow leaved. Height 3 ft. A most effective plant. Foliage bronzy-crimson. Pkt., 15c.

**2122. Sunrise.** A most beautiful plant; height, 2 feet; the leaves are long and narrow, the upper ones of the brightest glowing crimson. Pkt., 15c.

**2145. Asparagus plumosus.** Probably the most popular house plant today. You can grow it for yourselves and neighbors. The leaves are bright green, gracefully arched, surpassing Maiden Hair Ferns in grace, delicacy of texture and richness of color. Pkt., (10 seeds) 15c.

**Bachelor's Button. Double Cornflowers.**

Also known as Centaurea, Cornflower, Blue Bottle, Ragged Sailor, etc. These are among the most attractive of all hardy annuals and one of the most popular of all old-fashioned flowers.

**2151. Double Bachelor's Button.** All colors mixed.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

**2152. Double Blue.** One of the leading annuals. It is identical in color to the popular single blue Cornflower, which is so much in demand for cutting, especially for buttonholes, but, being a full, double flower, it takes fewer of them to make a nice bunch, and it is better in every way. The plants form nice symmetrical bushes about 18 inches high.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

**2153. Double Rose-pink.** The flowers are quite double, and of an attractive clear rose-pink, a color that is always in demand both in the garden and for cutting.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

**Balsam or Lady Slipper.** Double Camelia Flowered. An old and favorite garden flower, producing its gorgeous masses of beautiful, brilliant colored double flowers in the greatest profusion; of easy culture; succeeds in a good rich soil. Our strain is unrivaled for great variety and size of flowers. 2 feet.

**2155. Snow White.** . . . . . pkt., 10c. **2158. Scarlet.** . . . . . pkt., 10c.

**2156. Pink.** . . . . . pkt., 10c. **2159. Light Lemon.** . . . . . pkt., 10c.

**2157. Salmon Prince,** very durable, exquisite salmon pink . . . . . pkt., 10c.

**2160. Solferino,** white, striped with purple scarlet . . . . . pkt., 10c.

**2163. Balsam,** all colors mixed. . . . .  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**2125. Anchusa. Cape Forget-Me-Not.**

A rare annual of great beauty. Grows two feet high. It will thrive in a shady, out-of-the-way place where scarcely anything else will grow. It resembles a large beautiful Forget-Me-Not of deep blue color. Blooms all Summer. Pkt., 10c.

**Antirrhinum or Snapdragon.**

Snapdragons were a feature of the old-fashioned garden. Then for a time they were neglected, but suddenly when the improved new sorts appeared, they became one of the most fashionable bouquet flowers. Today they are being raised in gardens everywhere since the splendid flower spikes appearing all Summer, are as valuable for bedding effects as for cutting and form a pleasing contrast to some of the stiffer, coarse annuals.

**Culture.** Should be sown in open ground the latter part of May. It is best to start seeds indoors in a shallow box or in a hot-bed, in a temperature of about 65 degrees. Cover seeds to a depth of four times their size and press surface firm with a board. Water with a fine spray. Transplant seedlings after second leaves form and remove to garden when weather is warm and settled. All Giant varieties, per pkt., 15c.

**2127. Giant White** **2130. Giant Yellow**

**2128. Giant Scarlet** **2131. Giant Pink**

**2129. Giant Garnet** **2132. Giant Striped**

**2134. Queen of the North.** Grows 1 foot high and densely covered with large white flowers. A gem for beds and borders, valuable for pot culture. Pkt., 10c.

**2135. Tom Thumb Mixed.** Large variety of colors; best for bedding. Pkt., 15c.

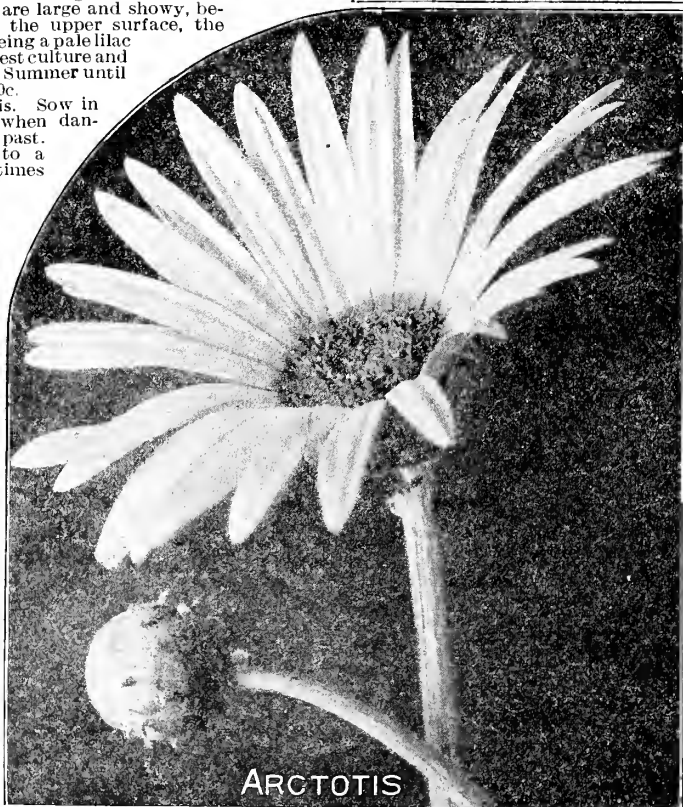
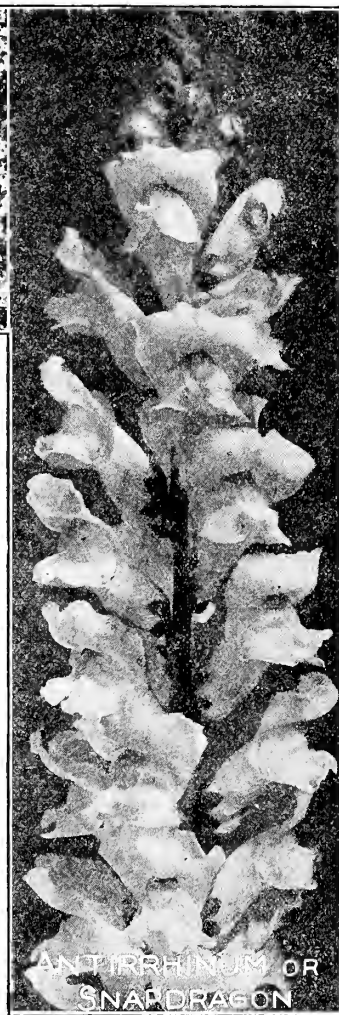
**2136. Tall Mixed.** Extra fine selection, best for cutting.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

**2140. Arctotis. Blue Eyed African Daisy.** A remarkably handsome new annual. It forms a branching bush 2 to 3 feet high. Its flowers are large and showy, being pure white on the upper surface, the reverse of petals being a pale lilac blue. It is of easiest culture and flowers from early Summer until late Fall. Pkt., 10c.

**Culture for Arctotis.** Sow in the open ground when danger from frost is past. Cover the seeds to a depth of four times their size and press surface firmly with a board. Water with fine spray.

**2140. Arctotis.** Blue Eyed African Daisy. A remarkably handsome new annual. It forms a branching bush 2 to 3 feet high. Its flowers are large and showy, being pure white on the upper surface, the reverse of petals being a pale lilac blue. It is of easiest culture and flowers from early Summer until late Fall. Pkt., 10c.

**Culture for Arctotis.** Sow in the open ground when danger from frost is past. Cover the seeds to a depth of four times their size and press surface firmly with a board. Water with fine spray.



**Northrup, King & Co.'s Sterling Balsam.**

**2162. Mixed.** The finest mixture possible to combine, representing the best selections from the most celebrated specialists of Europe. The flowers are very large, measuring from two to three inches in diameter, of perfect form, resembling the flower of the Camellia, and are as double, in fact, the petals are so densely produced that the yield of seed is extremely small, one single plant often producing not more than five seeds. The colors of the flowers are varied and brilliant, comprising pure white, crimson, white shaded lilac, rose, spotted, scarlet, blue, purple and many other tints.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

**2166. Bartonia aurea.** Large golden blossoms, similar in shape to the Evening Primrose. Valuable for borders. One foot in height. Pkt., 10c.

**2176. Bidens dahlioides.** One of the finest additions to the list of annuals for cut flowers. The blossom is suggestive of the Dahlia and Coreopsis with both of which this plant is allied. The flowers which are produced on long stems are large, single, pink or white with yellow centers. The seeds should be started inside and planted out when danger of frost is over. They do best in a sunny location, but need cool, moist soil, so it is well to keep the ground well mulched. See illustration on page 46. Mixed, pkt., 25c.

**2177. Brachycome. Swan River Daisy.** Free-flowering, dwarf-growing annual, covered during the greater part of the summer with a profusion of pretty blue or white flowers; suitable for edgings. Pkt., 10c.

**Browallia.** A favorite profuse-blooming bedding plant, covered during the Summer and Autumn, with beautiful flowers of intense blue; grows freely in any rich soil.

**2178. Speciosa Major.** Large-flowering variety, brilliant ultramarine blue, a rare color. Especially valuable as a pot plant. Pkt., 15c.

**2180. Elata Coerulea.** Large sky blue flowers with a white center. Plants 18 inches high. Pkt., 10c.

**Calendula. Pot Marigold.** Freely flowering plants of easiest culture, succeeding everywhere and flowering continuously. Flowers double, showy, of large size and pleasing colors. One of the best old-fashioned flowers.

**2185. Orange King.** Double, dark orange red, a very select strain grown with the greatest of care. The plants in the open ground under ordinary field cultivation attain a growth of 18 inches high and produce blossoms  $3\frac{1}{2}$  inches in diameter. What they will do under intensive hot-house culture can be left to the imagination. Oz., 50c; pkt., 5c.

**2190. Lemon King.** Double, bright sunflower yellow. We believe this should be equally as popular as the Orange King as it has the same habit of growth and the blooms are fully as large, being  $3\frac{1}{2}$  inches in diameter. These two varieties produce the largest blooms of any of the Calendulas. Oz., 50c; pkt., 5c.

**2195. Nankeen.** A very distinct variety, the double flowers of a creamy-yellow, slightly flushed apricot, dark brown eye. Oz., 40c; pkt., 5c.

**2200. Meteor.** Large, double yellow, striped with orange, very showy. Oz., 35c; pkt., 5c.

**2205. Prince of Orange.** Resembles Meteor but is much darker, especially fine. Oz., 35c; pkt., 5c.

**2210. All colors mixed.** Oz., 25c; pkt., 5c. For other Marigolds, see page 51.

**Calliopsis or Coreopsis.** Showy and beautiful free-flowering annuals, of the easiest culture, doing well in any sunny position, blooming all summer and excellent for cutting and massing. It is best to sow them where they are to bloom, thinning out to stand 6 to 12 inches apart. By keeping the old flowers cut off the flowering season can be lengthened until late autumn.

**2215. Crown of Gold.** Large, rich golden yellow. Height 18 inches. Fine for cutting.  $\frac{1}{4}$  oz., 30c; pkt., 10c.

**2220. Crimson King.** An excellent dwarf variety; color, velvety crimson garnet. Height nine inches.  $\frac{1}{4}$  oz., 30c; pkt., 10c.

**2225. Tiger Star.** Plants not over 9 inches high. flowers of rich reddish brown, tigered with golden-yellow, not unlike some of the Orchids.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

**2230. Drummondii, Golden Wave.** Rich golden-yellow with small chestnut-brown center; very freely flowering.  $\frac{1}{4}$  oz., 20c; pkt., 5c.

**2235. Nigra Speciosa.** A beautiful crimson color.  $\frac{1}{4}$  oz., 20c; pkt., 5c.

**2240. Double Tinctoria.** Double and semi-double very showy flowers of rich maroon, edged with gold; 18 inches high.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**2245. Tinctoria.** Another showy variety, the large flowers being bright yellow and maroon, about evenly divided; height 2 feet.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**2250. Mixed Colors.** Oz., 50c; pkt., 5c.



BRACHYCOME SWAN RIVER DAISY

**Candytuft.** Universally known and cultivated. When sown in April, flowers from July until frost. Very hardy and easy to cultivate. Height, 1 foot.

**2255. Giant Hyacinth Flowered or Improved Empress.** An improved strain of the Empress Candytuft, forming much branched plants about 18 inches high, each branch terminated by an immense spike of very large individual pure white flowers. Makes a very effective white bed or border and is invaluable for cutting. Oz., 75c;  $\frac{1}{4}$  oz., 25c; pkt., 10c.

**2260. Purple.** Oz., 35c; pkt., 10c. **2275. White Rocket.** Oz., 40c; pkt., 10c.

**2265. Tom Thumb.** White. Oz., \$1.00; pkt., 10c. **2280. Crimson Oz.**, 50c; pkt., 10c.

**2270. Lavender.** Oz., 40c; pkt., 10c. **2285. Mixed Colors.** Oz., 40c; pkt., 5c.

**2290. Canna. Indian Shot.** Dwarf Large Flowering French. Unquestionably the finest of bedding plants for the American climate and easily grown from seed. Soak the seeds in warm water until they swell, then sow in sandy loam and place in a hotbed. When up to the second leaf pot off singly and keep under glass until the proper planting season. A mixture of many varieties. Oz., 50c; pkt., 15c.

**CARNATIONS.**

Carnations are general favorites because of their rich colors, spicy fragrance and profusion of flowers. All the following varieties do well from seed, but the Marguerite and Chabaud types are the best for summer flowering.

**Everblooming Chabaud Carnations.** A new strain raised by M. Chabaud, the Carnation specialist of France. The plants are of even height as if trimmed, the stalks very stiff, the flower large, double and deliciously sweet. It has the largest and most charming color variation. These usually bloom in five months from time of sowing.

**2295. Fine Mixed.**  $\frac{1}{4}$  oz., \$1.00; pkt., 25c.

**Carnation Grenadin.** The best scarlet Carnation for out-door blooming. Comes into bloom very early. The beautiful, double, scarlet flowers are borne in great profusion and are very valuable for bouquets and cut flower use.

**2300. Brilliant Double Scarlet.**  $\frac{1}{4}$  oz., \$1.25; pkt., 25c.

**Marguerite Carnations.** This new class of Carnations blooms in about five months after sowing. The flowers are of brilliant colors, ranging through many beautiful shades of red, pink, white, variegated, etc., exquisitely sweet and fully eighty per cent perfectly double. Seeds sown early in the year will give an abundance of flowers in July. Sown in May and kept pinched back, plants will bloom late in the Fall until checked by hard frosts. If protected by coarse straw litter they will live through the Winter and flower early the following Summer.

**2305. Deep Crimson...** Pkt., 15c. **2320. Fiery Scarlet...** Pkt., 15c.

**2310. Sulphur Yellow...** Pkt., 15c. **2325. Striped...** Pkt., 15c.

**2315. Bright Rose...** Pkt., 15c. **2330. Pure White...** Pkt., 15c.

**2335. Collection of one packet each of the above colors,** 75c.

**2340. Mixture of all colors Marguerite Carnations.** Pkt., 10c.

**Marguerite Carnations in separate colors.**  $\frac{1}{8}$  oz., 35c;  $\frac{1}{4}$  oz., 60c;  $\frac{1}{2}$  oz., \$1.00; oz., \$2.00.

**Giant Marguerite Carnations.** An improved strain producing flowers of immense size, frequently measuring  $2\frac{1}{2}$  to 3 inches across. Strong, vigorous growers and wonderfully free-flowering.

**2345. Mixed Colors.** Oz., \$1.50; pkt., 15c.

**Celosia Cristata. Cockscomb.** Freely blooming annuals, grow best in light soil not too rich. They make splendid border plants.

**2350. Empress. (Colossal size).** Some measure 4 feet from tip to tip, color rich crimson. Pkt., 10c.

**2355. Queen of the Dwarfs.** This is the best of the dwarf growing Cockscombs. The plants grow only 8 inches high with beautiful dark rose-colored combs, often 2 feet across. Pkt., 10c.

**Celosia Plumosa. Feathered Cockscomb.** These make fine plants for large beds or groups.

**2360. Thompson's Superb.** Of pyramidal growth, attaining a height of a little more than two feet and producing graceful, feathery plumes of the most brilliant crimson. In the sunlight the rich color of the flower spikes is beautifully contrasted with the bronze-colored foliage. Pkt., 10c.

**2365. Golden Plume.** Bright golden-yellow plumes. Pkt., 10c.

**2370. Plumosa, mixed.** Feathered. All colors. Pkt., 10c.

**2375. Celosia Childsi. Chinese Woolflower.** This is a unique form of the feathered Cockscomb, growing two to three feet high, by as much through, each branch terminated with a large head of rich crimson flowers that look as if made out of some silky-wool material. Very effective in beds or borders, but highly interesting and valuable for cutting, as they can be dried, and retain their bright color for weeks. Pkt., 15c.



BACHELOR'S BUTTON



**Centaurea Imperialis. Sweet Sultan.** This is without doubt the most beautiful of all the Centaureas. The beautiful sweet scented, artistic shaped flowers are borne on long, strong stems and when cut will stand for days in good condition. The plant itself is much stronger than any other Sweet Sultan. It is of very easy culture. One of the best annuals for cut flowers.

2380. Alba. Pure white. . . . . pkt., 10c  
 2385. Favorita. Rosy lilac. . . . . pkt., 10c  
 2390. Splendens. Purplish lilac. . . . . pkt., 10c  
 2405. All Colors Mixed. Large pkt., 10c; ¼ oz., 35c

2395. Armida. Pale lilac. . . . . pkt., 10c  
 2400. Graziosa. Purple. . . . . pkt., 10c  
 Collection 1 pkt., each of above 5 varieties, 40c

2410. **Centaurea Americana. Basket Flower.** A splendid native variety, growing 3 feet high and bearing imbricate thistle-like blooms of a rosy-lavender color. Very showy in the mixed border and splendid for cutting. ¼ oz., 35c; pkt., 10c.

2415. **Centaurea Suaveolens. Yellow Sweet Sultan or Grecian Corn-flower.** Very showy, large, bright yellow flowers; sweetly scented and a popular sort for cutting. ¼ oz., 35c; pkt., 10c.

**White-Leaved Centaureas. Dusty Millers.** Fine for bedding, vases, hanging baskets and pots; also extensively used for margins. As an edging to a bed of dark-leaved Cannas or Scarlet Sage these are very effective. Sow the seed early indoors, and transplant in May. The white-leaved Cinerarias are also known as Dusty Millers. See No. 2430.

2420. **Gymnocarpa** Fine cut silvery foliage; 1½ feet. 1000 seeds, 35c; pkt., 10c.

2425. **Candidissima** Silvery white; leaves broadly cut. 1000 seeds, 50c; pkt., 15c.

2430. **Cineraria Maritima Candidissima. White Leaved Dusty Miller.** These, as well as the white-leaved Centaureas are called "Dusty Millers." Fine for bedding, ribbon beds and margins; prized for their beautiful downy, silvery foliage; half hardy perennials, but should be treated as annuals; 2 feet. ¼ oz., 25c; pkt., 10c.

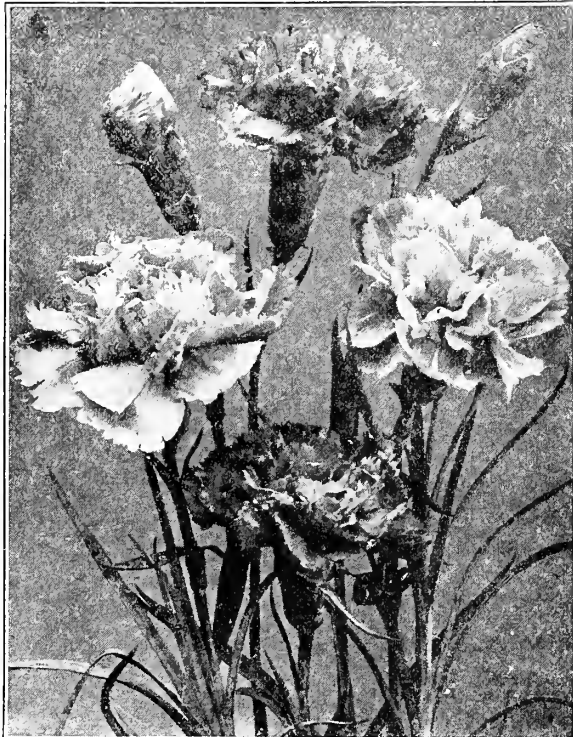
## Chrysanthemum.

Annual varieties. These are showy and effective garden varieties extensively grown for cut flowers. The foliage is ornamental and finely cut. The single varieties grow 12 to 18 inches high and produce on long stems large flowers resembling the Daisy, but of many bright colorings in distinct bands or rings.

2435. **Single Mixed. Painted Daisies.** Many colors. Oz., 35c; pkt., 5c.

2440. **Coronarum. Double Mixed** Yellow, white, etc. Oz., 35c; pkt., 5c.

2445. **Evening Star, or Helios.** Rich sunflower yellow, the disc slightly deeper yellow. Oz., 50c; pkt., 10c.



Marguerite Carnations.

2500. **Scarlet Queen.** Brilliant orange-scarlet, a rare shade. ¼ oz., 35c; pkt., 10c.

2505. **Cleome Pungens. Giant Spider Plant.** Grows four to five feet high, strong and sturdy. Flowers borne in abundance, rosy-pink fading to white. Seed pods give the appearance of a big spider. Used largely in the Minneapolis parks. Very attractive for beds and mass planting. Pkt., 10c.

2510. **Rainbow Corn. Zea Japonica Variegata.** As an ornamental foliage plant but very interesting. It grows about 5 feet high, quite bushy, the wonderfully variegated leaves being striped with bright green, silvery white, rosy purple and sulphur yellow. It makes a very pretty dividing line between the vegetable and flower garden, or it may be used in the mixed border. Oz., 35c; pkt., 10c.

**Coleus.** The most largely used, perhaps, of all bedding plants. These are easily grown from seed.

2515. **Mixture of Fancy Fringed Coleus.** Pkt., 25c.

2520. **Mixed Coleus.** Tall growing plants of many bright colors. Pkt., 25c.

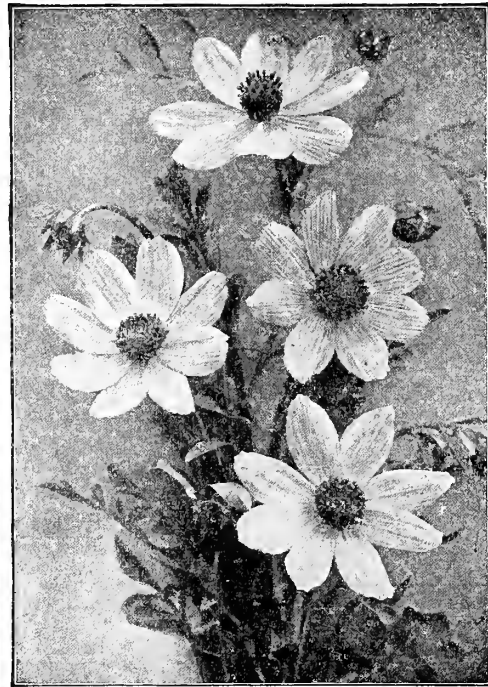
## 2525. Cyclamen. Giant Flowered

Rich colored and fragrant for Winter flowering. Seed may be sown Spring or Autumn. The culture of Cyclamen from seed is much more satisfactory than from bulbs. Mixed colors. Pkt., 25 seeds, 25c.

**Culture for Cyclamen.** Sow the seed in gentle heat, in shallow boxes or pans filled with a compost of sandy loam, leaf mould and coarse sand. Sow seed on surface and cover with two inches of wet sphagnum moss. Water carefully and keep at a uniform temperature of 50 to 60 degrees. When the plants have made 2 leaves transplant into small pots.



Giant Flowered Cyclamen.



Bidens Dahlioides.

(Chrysanthemum Continued)

2450. **Inodorum Plenissimum. Double White Mayweed.** Makes a bushy plant about 2 feet high, with fine feathery foliage, and pure white, densely double flowers, which are produced from mid-summer till frost; splendid for cutting. ¼ oz., 35c; pkt., 10c.

2455. **Double Yellow.** Oz., 50c; pkt., 10c.

2460. **Burridgeanum.** Pure white petals with zone of rich brownish red and inner zone of yellow surrounding the dark brown disc. Oz., 50c; pkt., 10c.

2465. **Eastern Star.** Clear yellow petals with dark disc. Oz., 50c; pkt., 10c.

2470. **Morning Star.** Petals canary yellow, with halo of deeper yellow; disc dark yellow. Oz., 50c; pkt., 10c.

2475. **Northern Star.** Very large daisy-like flowers, 3 inches across, with pure white fringed petals with canary-yellow zone around a dark brown eye. Oz., 40c; pkt., 10c.

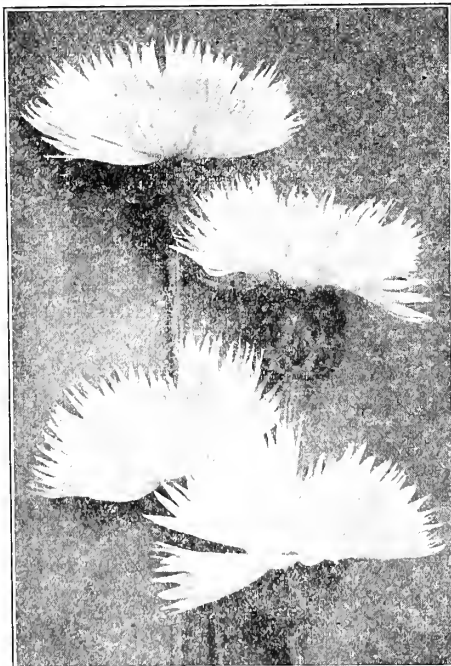
2480. **The Sultan.** Rich wallflower red with narrow yellow zone around the brown disc. Oz., 50c; pkt., 10c.

**Clarkia.** Bright and attractive annuals of easy culture. The long graceful sprays are valuable for table decoration. They thrive in sun or shade, growing 2 to 2½ feet high, with masses of double flowers, which all open in water when cut.

2485. **Double.** All colors mixed. ¼ oz., 35c; pkt., 10c.

2490. **Brilliant.** Rich crimson-scarlet, very double. ¼ oz., 35c; pkt., 10c.

2495. **Salmon Queen.** Salmon-pink, extra double. ¼ oz., 35c; pkt., 10c.



Centaurea Imperialis. Sweet Sultan.



Northrup, King &amp; Co.'s Extra Early Cosmos.

### Northrup, King & Co.'s Extra Early and Mammoth Cosmos.

Cosmos is the showiest of our late Summer and Autumn blooming annuals. Its graceful flowers borne on long stems rising above the feathery foliage are very desirable for home or church decoration, lasting a week or more in water. It is a very prolific bloomer and if the plants are given enough space to develop well, will branch freely, every shoot being covered with a mass of lovely flowers. Cosmos is very effective among shrubbery and especially desirable for interplanting with early blooming perennials as it fills in the gaps when the latter die down.

**Extra Early Cosmos.** The earliest flowering variety in cultivation, blooming fully two months in advance of any other strain known. Seeds sown in open ground, in early May, will produce blooming plants in July, and continue a mass of bloom until killed by frosts. It is the result of painstaking selection from a few plants several years ago, which showed a decided tendency to earliness. This desirable trait is so well established, that instead of a few plants coming early,—as in other early varieties—our Extra Early Cosmos is uniformly so, and will bloom in any part of the North. The plants grow about four feet tall. As a result of continued selection for earliness and size this strain of Cosmos has been placed in a class by itself. The blossoms under ordinary field cultivation average 4 to 5 inches across, surpassing in size any of the late varieties. From seed sown in the open ground, the "White" blossoms in 60 days, the "Pink" in 65 days and the "Crimson" in 70 days.

2530. Northrup, King & Co.'s Extra Early. All colors, mixed,  $\frac{1}{4}$  oz., 25c; pkt., 10c.

2535. Extra Early Crimson. Pkt., 10c. 2545. Extra Early White. Pkt., 10c.

2540. Extra Early Rose. Most pleasing color of all.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

**Mammoth Cosmos.** The following varieties of Cosmos usually do not start blooming until several weeks after the Extra Early sorts, consequently they are sometimes nipped by early frost. To insure success therefore, it is best to start all Mammoth varieties in-doors in early April, later transplanting them to the garden when danger of frost is over. By this method they start to bloom in good season and the very large flowers well repay the extra trouble.

2550. Mammoth Crimson. Pkt., 10c. 2560. Mammoth White. Pkt., 10c.

2555. Mammoth Pink. Pkt., 10c. 2565. Mammoth Yellow. Pkt., 10c.

2570. Mammoth Mixed. All colors. Pkt., 10c.

### New Extra Early Flowering Double Cosmos.

Some years since a few individual plants of Cosmos showed evidence of producing double flowers, but it has taken a great deal of care and patience to perfect the strain now offered. The flowers vary considerably in their degree of doubleness, some being absolutely double, while others have a frill or collar surrounding the double disc, and while we think this is the most artistic, they are beautiful in either form. They grow to a height of about three feet, forming a perfect bush massed with bloom, bearing beautiful double flowers of good size on long stems; they come about seventy-five per cent double from seed. They bloom in seventy days from the day seed is sown, so that seed sown the latter part of April will easily be in bloom by the Fourth of July and continue until cut down by frost.

2575. Early Flowering Double White. Pkt., 25c.

2580. Early Flowering Double Pink. Pkt., 25c.

2585. Early Flowering Double Crimson. Pkt., 25c.

2590. Giant Pink Lady Lenox. A late development in this popular autumn flower; bears gigantic flowers, with wide, overlapping petals of splendid substance, making a perfectly circular flower, which is borne on very long stems; in color a beautiful deep rosy pink.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

2595. Giant White Lady Lenox. The white-flowered form of the above.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

2600. Klondyke. Golden-yellow flowers borne on long stems, and measure from  $2\frac{1}{2}$  to  $3\frac{1}{4}$  inches across. To get this variety in bloom before frost in the northwest it should be grown in pots or boxes, so that the roots are confined, thus throwing it into flower. Pkt., 10c.

**Dahlia.** Dahlias can be grown easily from seed so as to produce flowers the first year. This is as true of double Dahlias as of single. In the Dahlia are combined more desirable qualities than are found in almost any flower grown in the open ground. It can be had in perfection from June until cut down by frosts. In it can be found not only every imaginable color except blue, but the most beautiful combination of colors and marvelous blending of shades and tints imaginable. As a cut flower the Dahlia is unsurpassed, owing to its great diversity of bloom and the brilliant luster of its colorings.

### 2605. Northrup, King & Co.'s Sterling Mixed Dahlia.

This mixture is intended to embrace seed of every desirable Dahlia procured from the most prominent Dahlia specialists of this and other countries, and blended by us. Pkt., 25c.



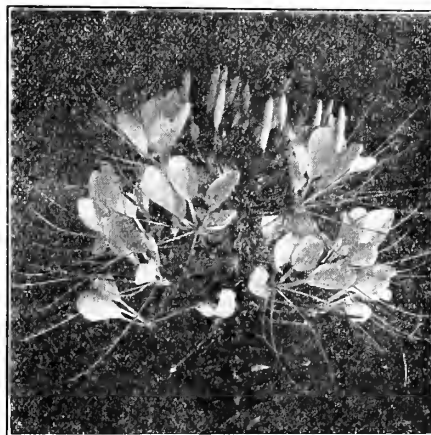
### 2610. Twentieth Century or Orchid Flowered Dahlia.

In size the flowers are giants,  $4\frac{1}{2}$  to 7 inches across, and in color vary from almost pure white to deeper crimson. These large single flowers are truly magnificent. Pkt., 25c.

2615. Double Cactus Dahlia. Very desirable; many colors. Pkt., 25c.

2620. Double Dahlia. Very large flowering, fine mixed. Pkt., 25c.

2625. Single Mixed Dahlia. All colors. Pkt., 25c.



Cleome Pungens. Giant Spider Plant.

2630. **Datura. Angel's Trumpet.** Showy, large, branching plants growing 5 to 6 feet high, bearing large trumpet-shaped flowers, 6 inches in length and very fragrant. Mixed seeds of all varieties, pkt., 10c.

**Dusty Miller.** See Centaurea page 46.

### 2635. Dimorphotheca Aurantiaca. Orange African Daisy.

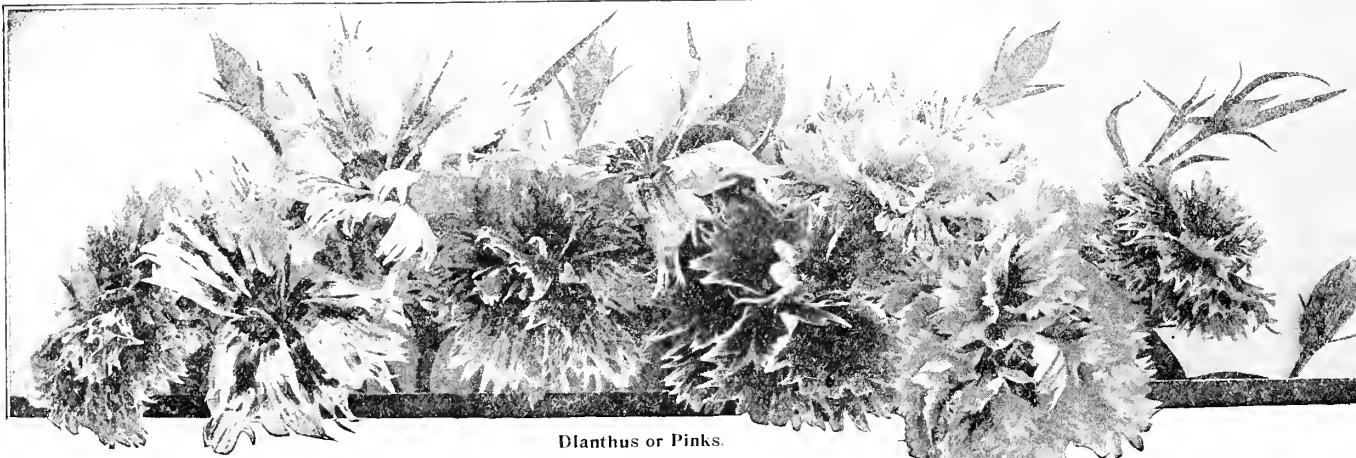
A rare and extremely showy annual Daisy from South Africa which thrives under our climatic conditions perfectly. The bushy plants grow 12 to 15 inches high. The flowers,  $2\frac{1}{2}$  inches across, are a unique, rich, glossy orange-gold, with dark disc and these glitter in the sunshine and present a magnificent sight. Seed may be sown in the same way as Asters. They bloom the greater part of Summer and Fall.  $\frac{1}{4}$  oz., 40c; Pkt., 15c.

### Everyone Enjoys Flowers.

Flowers beautify any home. The common varieties can be grown easily and inexpensively. No home is complete without a bed of flowers to give color and interest to the scene. By choosing early and late varieties a succession of blooms may be enjoyed from early summer until frost. It is advisable also to choose varieties which have long stems and are suitable for cut flowers.



DIMORPHOTHECA AURANTIACA



Dianthus or Pinks.

**Dianthus or Pinks.** One of the most popular and magnificent flowers in cultivation. The varieties classed as annuals are really biennials, but are treated as annuals and may be sown out of doors when the danger from frost is past, and in a few weeks' time they are a mass of bloom, continuing so until after hard frost. As a rule, they survive the winter if given slight protection, flowering abundantly the following season. They grow about a foot high and can be used in beds or borders of solid or mixed colors. The double flowering sorts are almost as fine as carnations for cutting. They are not particular as to soil, but should have a sunny location.

### Double Annual Pinks

- 2640. Double Annual Pinks, Mixed.** A fancy mixture of beautiful varieties.  $\frac{1}{4}$  oz., 25c; pkt., 5c.
- 2645. Chinensis Fl. Pl. Double China or Indian Pink.** Flowers very double and of many bright colors.  $\frac{1}{4}$  oz., 25c; pkt., 5c.
- 2650. Diadematus Fl. Pl. Double Diadem Pink.** Beautiful double flowers; mixed, of various tints of lilac, crimson, purple, to very dark purple, with the outer edge fringed and nearly white.  $\frac{1}{4}$  oz., 35c; pkt., 5c.
- 2655. Heddwigi Fl. Pl. Double Japan Pink.** Double mixed. Colors varying from the richest velvety crimson to the most delicate rose.  $\frac{1}{4}$  oz., 30c; pkt., 5c.
- 2660. Imperialis Fl. Pl. Double Imperial Pink.** Double in a very large range of colors.  $\frac{1}{4}$  oz., 30c; pkt., 5c.
- 2665. Laciniatus Fl. Pl. Double Fringed Pink.** Large double, showy flowers, with fringed edges, in a great variety of colors.  $\frac{1}{4}$  oz., 75c; pkt., 10c.
- 2670. Fireball.** Rich, blood-red. Makes a striking contrast to the variety Snowball.  $\frac{1}{4}$  oz., 75c; pkt., 10c.
- 2675. Lucifer.** A new double flowering form of the bright geranium-red single Pink Vesuvius. The nicely fringed double flowers are about 2 inches across, and owing to its intense, dazzling color, a general favorite.  $\frac{1}{4}$  oz., 75c; pkt., 15c.
- 2680. Mourning Cloak.** White Frill. Rich, blackish velvety crimson margined white.  $\frac{1}{4}$  oz., 75c; pkt., 10c.
- 2685. Nobilis Fl. Pl. Double Royal Pink.** Flowers of largest size, varying in color from scarlet dark blood-red and rose to white.  $\frac{1}{4}$  oz., 50c; pkt., 10c.
- 2690. Snowball.** Large double white, splendid for cutting or as a border.  $\frac{1}{4}$  oz., 75c; pkt., 10c.
- 2695. Salmon King.** Brilliant salmon rose. Pkt., 15c.

### Single Annual Pinks

All the single sorts have large flowers 2 to 3 inches in diameter; their many and brilliant colors make them very desirable for beds and borders; 1 foot.

- 2697. Single Annual Pinks, Mixed.** A beautiful mixture of all the single varieties.  $\frac{1}{4}$  oz., 25c; pkt., 5c.
- 2700. Crimson Belle.** Rich velvety crimson.  $\frac{1}{4}$  oz., 35c; pkt., 5c.
- 2705. Eastern Queen.** Beautiful marbled rose and mauve flowers.  $\frac{1}{4}$  oz., 35c; pkt., 5c.
- 2710. Heddwigi.** Japan Pink. Finest selected single-flowered; mixed.  $\frac{1}{4}$  oz., 35c; pkt., 5c.
- 2715. Laciniatus.** Fringed Pink. A beautiful fringed variety; various colors.  $\frac{1}{4}$  oz., 35c; pkt., 5c.
- 2718. Nobilis.** Royal Pinks. Selected and improved varieties of the popular single-flowering Japan pink. The colors vary from white to dark red.  $\frac{1}{4}$  oz., 50c; pkt., 10c.
- 2720. Punctatus.** Princess Pinks. A very novel variety, with fringed flowers mottled, flaked, spotted and striped in the greatest diversity of colors.  $\frac{1}{4}$  oz., 50c; pkt., 10c.
- 2725. Salmon Queen.** The well formed, nicely-fringed flowers are a brilliant salmon color changing into a salmon-rose when fading. The seeds of this variety are white or yellowish-white; those of other annual Pinks are dark brown or black.  $\frac{1}{4}$  oz., 35c; pkt., 10c.
- 2730. Vesuvius.** Brilliant geranium-red; makes a very effective bed or border.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

**Cultural Directions.** Sow out of doors when danger from frost is over, in the bed or border where they are to flower. The soil should be well pulverized and the seed covered to a depth of about 4 times their size. Press down firmly with a board, and thin out so that the plants will not become crowded. For early flowering they should be sown indoors in a shallow box, or in a hotbed, transplanted as previously suggested, and transferred to the open ground when the weather becomes suitable.

**Euphorbia Variegata.** Strong-growing annuals, suitable for beds of tall growing plants; or mixed borders; the flowers are inconspicuous; the foliage, however, is exceedingly ornamental.

**2735. Snow on the Mountain.** Attractive foliage; veined and margined with white. 2 feet.  $\frac{1}{4}$  oz., 25c; pkt., 10c.



Gypsophila, Babys Breath.



Calliopsis or Coreopsis.





## Eschscholtzia. California Poppy.

The California Poppy is a showy, free-flowering plant so popular with everyone as scarcely to need introduction. Particular attention is drawn to *Hunnemannia* often called Bush Eschscholtzia. See Number 2860. This is a beautiful annual which flowers freely and bears a great abundance of brilliant yellow tulip-shaped flowers. Do not overlook this beautiful variety in placing your orders.

**2740. Chrome Queen.** An entirely new and distinct tone, being a rich chrome yellow.  $\frac{1}{4}$ oz., 25c., pkt., 10c.

**2742. Crimson.** Very rich color, one of the most beautiful.  $\frac{1}{4}$ oz., 25c.; pkt., 10c.

**2745. Dainty Queen.** A beautiful and delicately colored sort of pale coral-pink on a cream ground.  $\frac{1}{4}$ oz., 25c., pkt., 10c.

**2748. Fringed Yellow.** Deep pure yellow, the petals deeply cut or fringed.  $\frac{1}{4}$ oz., 25c., pkt. 10c.

**2750. Geisha.** The prettily fluted or ruffled petals are a bright glistening scarlet on the outside, while the inside is a rich golden orange, a most brilliant Oriental color combination.  $\frac{1}{4}$ oz., 35c., pkt., 15c.

**2752. Golden West.** Bright yellow with large rayed blotches of deep orange at base of petals. Oz., 50c; pkt., 10c.

**2755. Lovely.** We consider this Eschscholtzia well named, it being a lovely tone of bright pink suffused with salmon, the blooms having a satiny appearance which adds very much to the effect. Pkt., 15c.

**2758. Mandarin.** Inner side of the petals rich orange, outer side brilliant scarlet. Oz., 75c; pkt., 10c.

**2760. Mauve Beauty.** A delicate new color previously unknown among Eschscholtzias it being a beautiful shade of pure mauve. Pkt., 15c.

**2762. Purple Glow.** Undoubtedly the greatest advance that has been made in Eschscholtzias. Its is a bright reddish purple and is the darkest shade that has been obtained so far. Pkt., 15c.

**2765. Scarlet Beauty.** This is one of the brightest colors in Eschscholtzias, it being a deep scarlet and as the plants are very erect, it has the appearance when in bloom of a vivid scarlet tulip. Pkt., 15c.

**2767. Tango.** Bronzy red overlaid terra cotta. A rare color among Eschscholtzias being the tango color which was so popular a few years ago. Pkt., 15c.

**2770. Vesuvius.** In this variety the color is the same on both sides of the petals, a rich Wall-flower or coppery red which glisten in the sun like molten metal.  $\frac{1}{4}$ oz., 25c., pkt., 10c.

**2775. All Colors, Mixed.**  $\frac{1}{4}$ Oz., 35c; pkt., 5c.

## Gaillardia. Blanket Flower.

Remarkable for the profusion, size and brilliancy of the flowers. blooming from early Summer until November. Excellent for borders or for cutting.

**2780. Double Flowering.** A charming, profuse, double flowering strain. Beautiful mixed colors.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

**2785. Single Annual Varieties, Mixed.**  $\frac{1}{4}$  oz., 20c; pkt., 5c.

## Geranium.

Comparatively few are aware that Geraniums may be grown easily from seed and flower the first season if sown early. This is the best way to secure Geraniums as they will requently reward the cultivator with charming new varieties. In fact, propagation by seed is the only way to obtain new varieties.

**2790. Zonale, Mixed.** A superb strain of the largest and finest varieties. Pkt., 25c

## Helianthus. Sunflower.

Hardy annuals, of sturdy growth, remarkable for the size and brilliancy of the flowers. Very useful as cut flowers. Effective in forming background of large beds or borders and for distant effect.

**2795. Chrysanthemum Flowered.** Perfectly double; the color is the brightest golden yellow. The flowers are so perfect in form that they resemble very much double Chrysanthemum-flowered Asters with long stems; grows seven feet high and bears profusely all Summer long.  $\frac{1}{4}$ oz., 25c., pkt., 5c.

**2800. Cucumerifolius. MINIATURE SUNFLOWER.** Single, rich golden yellow, with black center. An abundant bloomer, of branching habit, coming into flower in July and continuing until frost. 4 feet.  $\frac{1}{4}$ oz., 25c., Pkt., 5c.

**2802. Double California.** Handsome double flowers, golden yellow, green centre; 5 ft. Pkt., 10c.

**2805. Giant Russian.** Immense single flowers, yellow with large black center. 6 feet. Pkt., 5c.

**2807. Orion.** Very effective sort, particularly on account of its twisted petals, which resemble a Cactus Dahlia.  $\frac{1}{4}$ oz., 25c; Pkt., 10c.

**2810. Perkeo.** This is a beautiful dwarf variety of the miniature Sunflower. The plants form compact bushes about 12 inches high and about 15 inches through. Very useful for the front of borders or beds of plants of medium height. Flowers continually from early July until cut down by killing frost. Single; charming golden yellow, with black center.  $\frac{1}{4}$ oz., 25c; pkt., 10c.

(Helianthus, Sunflower. Continued.)

**2815. Cut and Come Again Sunflowers; Single and Double** in a beautiful mixture of all varieties. You will be delighted with these, flowering as they do from June until killing frost. Indispensable as cut flowers and also very popular for garden decoration.  $\frac{1}{4}$ oz 25c; pkt., 10c.

## Godetia.

An attractive, hardy annual deserving more extensive cultivation. The plants bloom profusely and bear showy, mallow-like flowers of rich and varied colors. One foot in height.

**2820. Albemarle.** Dark crimson. Pkt., 10c.

**2825. Duchess of Albany.** Pure white. Pkt., 10c.

**2830. Lady Satin Rose.** Carmine. Pkt., 10c.

**2835. All Colors, Mixed.** Oz., 50c; pkt., 10c.

## Gypsophila. Bridal Veil. Baby's Breath.

Flowers in a few weeks after sowing. Its graceful panicles of dainty blossoms and feathery foliage are unequalled for making up bouquets. Sow at intervals during the Summer.

**2840. Elegans alba grandiflora.** Pure white Oz., 25c; pkt., 5c.

**2845. Elegans carmine.** New shade. Pkt. 10c.

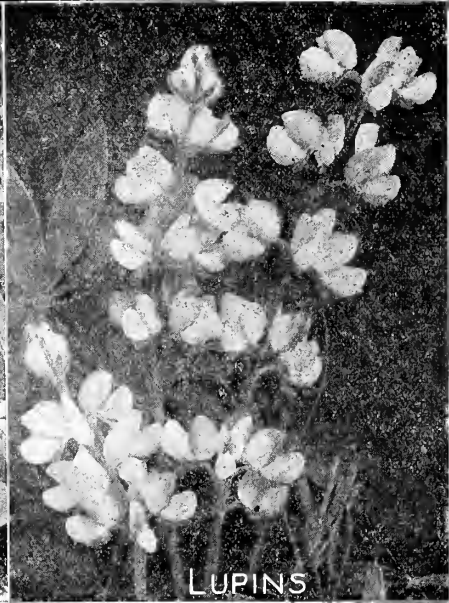
**2850. Elegans rosea.** Rose. Pkt., 10c.

**2855. Heliotrope.** Is a universal favorite on account of its delightful fragrance and long duration of bloom, flowering equally well as bedding plants in Summer or as pot plants in the house in the Winter. It is not generally known that Heliotrope may be raised from seed as easily as the Verbena. The best varieties in mixtures,  $\frac{1}{4}$  oz., 75c; pkt., 25c.

## 2860. Hunnemannia. Giant Yellow Tulip Poppy

or Bush Eschscholtzia. Flowers are a rich shade of buttercup yellow, with feathery glaucous foliage. The best of the Poppy family for cut flowers, remaining in condition for several days. Seeds sown in May will produce flowering plants in July, which blossom continuously until hard frost.  $\frac{1}{4}$  oz., 25c; pkt, 10c.





**2865. Ice Plant.** Dwarf trailing annual, white flowers and thick, ornamental leaves which appear to be covered with crystals. Thrives in bright sunlight and dry situations. Pkt., 10c.

**2870. Impatiens Holstii.** Charming plants for house decoration or dinner table, producing bright, waxy flowers profusely and continuously. All colors. Pkt., 25c.

**2875. Kochia.** Summer Cypress or Mexican Fire Bush. An easily grown annual, which sown thinly in Spring soon forms a cypress-like hedge of lively green and of perfect symmetry; it attains a height of about 3 feet, and on the approach of Autumn the whole plant becomes a deep red; a splendid plant to divide the vegetable from the flower garden, or for forming a hedge for the Summer for any purpose. See page 51.  $\frac{1}{4}$ oz., 25c; Pkt., 5c.

**2880. Lantana.** Well known bedding plants, with clusters of Verbena-like flowers, producing pink, yellow, orange and white heads in great abundance. They have an agreeable aromatic perfume. Mixed,  $\frac{1}{4}$ oz., 25c; pkt., 10c.

**Larkspurs.** This is one of the best known garden flowers. A vast improvement has been effected, by careful selection and attentive cultivation, in size and color of the blossoms and the general habit of the plant. Hardy annuals.

<b>2885. Dark Blue.</b> .....Pkt., 10c.	<b>2890. Sky Blue.</b> .....Pkt., 10c.
<b>2887. Shell Pink.</b> ....." 10c.	<b>2892. Pure White.</b> ....." 10c.
<b>2900. Finest Mixed.</b> All colors..... $\frac{1}{4}$ oz., 20c; pkt. 5c.	<b>2895. Lustrous carmine</b> Pkt., 10c;

**Lavatera. Annual Mallow.** The soil should be well pulverized and the seed covered to a depth of about 4 times their size.  
**2905. Trimestris grandiflora rosea.** A very beautiful and showy annual, growing about 2 feet high and covered during the entire Summer with large, cup-shaped, shrimp-pink flowers. Sow in May where they are to bloom and thin out to 12 inches apart.  $\frac{1}{4}$ oz., 25c; Pkt., 10c.

**2910. Linum. Crimson Flax.** One of the most effective and showy bedding plants. Flowers brilliant scarlet.  $\frac{1}{4}$ oz., 15c; Pkt., 5c.

**Lobelia. Erinus Varieties.** The Erinus varieties bloom very quickly from seed and flower all through the season. For beds, edging, baskets and pots there is nothing prettier. Sow outdoors in early spring where the plants are to grow, and thin moderately; or transplant several inches apart in rich, open soil. Some stimulant given when they are in bloom greatly improves the flowers. Almost all are also good winter conservatory plants of trailing habit. The perennial or tall varieties are handsome, showy plants and will be found quite effective for back ground and grouping. Tender Annual.

<b>2915. Gracilis.</b> Blue; trailing; beautiful for baskets. Pkt., 10c.
<b>2918. Speciosa, Crystal Palace.</b> A favorite blue flowered edging plant. 6 in. Pkt., 15c.
<b>2920. Royal Purple.</b> Deep blue, with a distinct white eye. Pkt., 15c.
<b>2922. Erecta, Crystal Palace Compacta.</b> Dark blue; for bedding. 6 in. Pkt. 15c.
<b>2925. Emperor Blue.</b> Light blue; very fine Pkt., 15c.
<b>2930. White Lady.</b> Splendid, large flowered white. Pkt., 15c.

**2935. Lupins.** Annual Mixed. Very desirable garden plants, showy and excellent for cutting. Graceful spikes, 2 feet long, in various shades of white, blue, pink and yellow.  $\frac{1}{4}$ oz., 35c; Pkt., 5c.

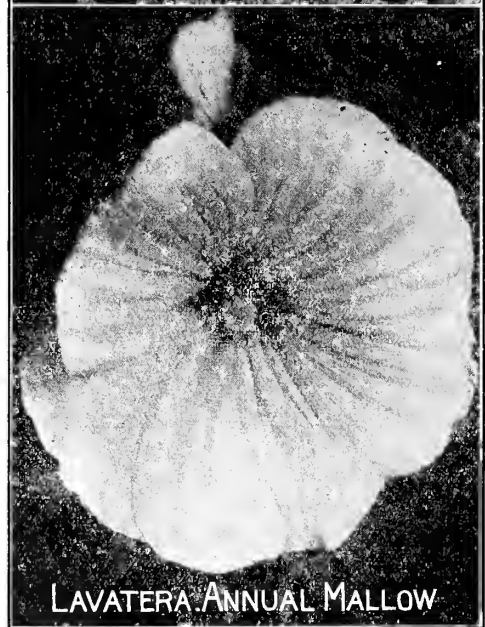
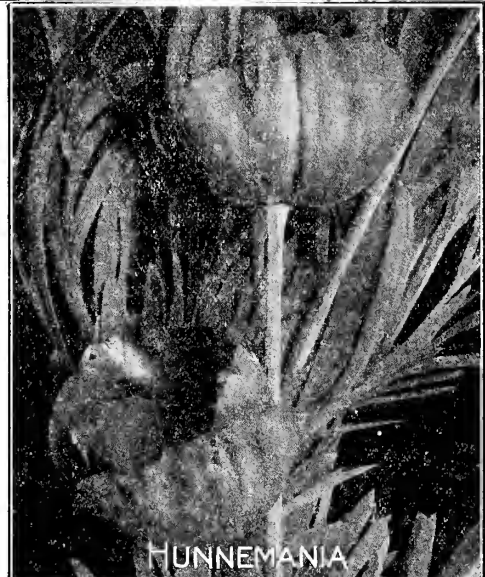
**2940. L. subcarneus.** A fine border plant, producing handsome spikes of the deepest sea-blue flowers; delicately fragrant. Hardy Annual. Pkt., 10c.

**2945. Marvel of Peru. Four O'Clocks.** Favorite half hardy annual of the easiest culture and very suitable for large beds and borders. Called Four O'Clock because it opens its blossoms at that hour in the afternoon. Handsome, free flowering, sweet scented; blossoms variegated, striped and of various colors. oz., 25c; pkt., 5c.

**2950. Matthiola Bicornis. Evening Scented Stock.** No annual in cultivation equals this in delicate perfume of its flowers. The pink and lilac blossoms partly close during the day but expand and impart their fragrance in the evening. Pkt., 10c.

**Culture for Matthiola Bicornis.** Sow out of doors, when danger from frost is over, in the bed or border where they are to flower. The soil should be well pulverized and the seed covered to a depth of about 4 times their size. Press down firmly with a board, and thin out so that the plants will not become crowded. For early flowering sow in-doors in a shallow box, or hot-bed, and transfer to the open ground when the weather becomes suitable.

**2955. Matricaria Capensis. Double White Feverfew.** The plant is numerous and freely branching flower stems which are literally covered with very double flowers, 1 inch in diameter. Pkt., 10c.

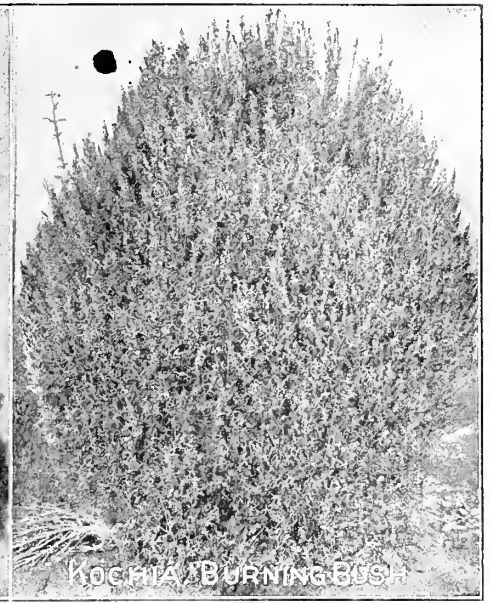




**HUMULUS**  
**JAPANESE HOP**



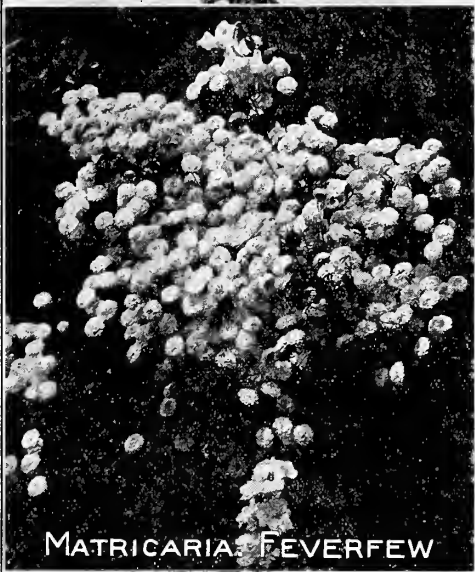
**MIGNONETTE**



**KOCHIA BURNING BUSH**



**AFRICAN MARIGOLD**



**MATRICARIA FEVERFEW**

**Marigold.** Well known garden favorite of quick growth and very free-flowering habit. Seed should be sown in shallow drills in the open garden early in the Spring after danger of frost is over and the trees are well out in leaf. Plants for early blooming may be started in boxes, placed in a sunny window in March, and the young plants grown in pots until the weather is warm enough to set outdoors. See Calendula, page 45.

**Double African Marigold.** Splendid for beds or borders; the tall varieties grow about 3 feet high, the dwarf sorts 18 to 24 inches.

2960. **Dwarf Orange.** Double quilled deep orange-yellow flowers, dwarf habit.  $\frac{1}{4}$  oz., 40c; Pkt., 10c.

2965. **El Dorado.** Large double imbricated flowers in all shades of yellow; 3 feet. pkt., 10c.

2968. **Lemon Queen.** A counterpart of Orange Prince except in color, which is a soft lemon-yellow and forming a fine contrast to the rich orange of the former. Pkt., 15c.

2970. **Orange Prince.** A tall growing variety, height  $2\frac{1}{2}$  ft., bearing large, perfect double-quilled flowers of a rich deep golden-orange color; the finest of all and very showy. Flowers continuously from early summer till hard frost. Pkt., 15c.

2972. **Pride of the Garden.** A dwarf growing double quilled golden yellow.  $\frac{1}{4}$  oz., 40c; Pkt., 10c.

2975. **Double Mixed.** African varieties containing all of the colors, 2 to 3 ft.  $\frac{1}{4}$  oz., 25c; Pkt., 5c.

**Dwarf Double French Marigold.** Few annuals are as effective as the French Marigolds or flower for so long a period; they all form dense bushes not over 12 inches high and are unequalled for borders or beds.

2980. **Gold Striped.** Very double golden yellow, each petal striped with rich brownish-red.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

2982. **Gold Edge Brown.** Bright golden yellow with narrow margin of velvety brown.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

2985. **Golden Ball.** A splendid pure golden yellow, flowers of good size and makes a very effective golden line or bed. Plants globular, 9 inches. Flowers from early summer until late autumn.  $\frac{1}{4}$  oz., 40c; Pkt., 10c.

2987. **Lutea.** Light lemon yellow, densely double-quilled flowers.  $\frac{1}{4}$  oz., 40c; pkt., 10c.

2990. **Mahogany.** Rich velvety mahogany-brown throughout.  $\frac{1}{4}$  oz., 40c; pkt., 10c.

2992. **French Mixed.** A splendid mixture saved from fine double flowers; all colors.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

2995. **Dwarf Single French Marigold.** Legion of Honor (Little Brownie). A single flowering Marigold, forming compact bushes 9 inches high. Begins flowering early, commencing in June, continuing until frost. The flowers are golden yellow, marked with a large spot of velvety crimson at the base of each petal.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**Mignonette. Reseda.** A well-known fragrant favorite; no garden is complete without a bed of Mignonette. Sowing made in April and again in July will keep up a succession from early Summer till frost.

**Culture.** Sow out of doors, when danger from frost is over, in the bed or border where they are to flower. The soil should be well pulverized and the seed covered to a depth of about 4 times their size. Press down firmly with a board, and thin out so that the plants will not become crowded. For early flowering they should be sown indoors in a shallow box, or in a hot-bed, and transferred to the open ground when the weather becomes suitable.

3000. **Defiance.** When grown under favorable conditions spikes will not only be of remarkable size— from 12 to 15 inches long— but deliciously fragrant. The individual florets are of immense size, forming a graceful as well as compact spike. Of good keeping qualities, retaining their grace and fragrance until every bud opens.  $\frac{1}{4}$  oz., 25c; pkt., 15c.

3002. **Golden Machet.** Distinct variety of Machet, differing from the type by its massive spikes of golden yellow blossoms.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

3005. **Goliath Red.** Of strong, yet compact habit, with rich green foliage; the giant trusses of flowers being borne on erect, strong, stiff stalks and surpassing all others in brilliancy of color; especially suited for house culture.  $\frac{1}{4}$  oz., 50c; pkt., 15c.

3007. **Machet.** Adapted for pot culture; dwarf pyramidal growth, bearing numerous flower stalks; highly colored and very fragrant.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

3010. **Salmon Queen.** Strong, robust habit, with fine spikes, of bright salmon-red flowers, intensely fragrant; fine for outdoor culture.  $\frac{1}{4}$  oz., 25c; pkt., 15c.

3015. **Sweet Scented. Reseda Odorata.** The old-fashioned variety with small spikes, but the most sweetly scented of all. Oz., 35c; pkt., 5c.

3020. **Mimosa pudica. Sensitive Plant.** Curious and interesting, pinkish-white flowers; the leaves close and droop when shaken;  $1\frac{1}{2}$  ft. Pkt., 10c.

3025. **Morning Glory. Convolvulus.** Dwarf Morning Glories Mixed. Hardy annual, 1 foot in height. Colors range from pure white to deep purple. oz., 20c; pkt., 5c.

3030. **Nicotiana Affinis. Tobacco.** Delightfully sweet-scented, pure white tubular flowers, blooming continually; annuals; 2 to 3 feet.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

3035. **Nicotiana Sanderae Hybrids.** A splendid type in a great diversity of color. All colors mixed, pkt. 10c.



**3040. Nicotiana Sanderae.** Carmine Tuberose Flowered Tobacco. This beautiful hybrid Nicotiana has been spoken of as a most strikingly beautiful plant. The originators describe it as forming bushy, much-branched plants, 2 feet high, the whole plant laden with flowers from base to summit—literally ablaze with handsome carmine-red, fragrant blossoms, thousands of which are produced on a single plant. In form the flower resembles Nicotiana Affinis but having a short, stout tube, and, unlike that variety, does not close up in daytime, but remains open all day; the fragrance, while not so powerful as Nicotiana Affinis, is decidedly delicious. It is as easy to grow as Petunia. If started indoors in early Spring and planted out in May it gives a continuous display of blooms all Summer and Autumn. It can also be sown in warm ground. Pkt., 10c.

**3045. Nigella Damascena.** Love in a Mist, or Devil in the Bush. A compact, free-flowering plant, with finely cut foliage, curious-looking flowers and seed pods; of easy culture, growing in any garden soil; hardy annual; blue and mixed; 1 foot. oz., 50c; pkt., 5c.

**3050. Miss Jekyll.** A lovely variety, with cornflower-blue blossoms, splendid for cutting. ¼ oz., 25c; pkt., 10c.

**3055. Nemophila.** Splendid, free-flowering, hardy annuals, of very neat, compact habit. Flowers are cup-shaped, appearing in many brilliant colors, the blue shades being particularly striking. Blossom continuously throughout the Summer, thriving best in a cool, or moist, shady place where the soil is not too rich. All colors mixed, with many shades of blue. Oz., 50c; pkt., 5c.

**Culture for Nemophila.** Sow out of doors, when the danger from frost is over, in the bed or border where they are to flower. The soil should be well pulverized and the seed covered to a depth of about four times their size. Press down firmly with a board and thin out so that the plants will not become crowded. For early flowering they should be sown indoors in a shallow box, or in a hot-bed, and transferred to the open ground, when the weather becomes suitable.

## NASTURTIIUM.

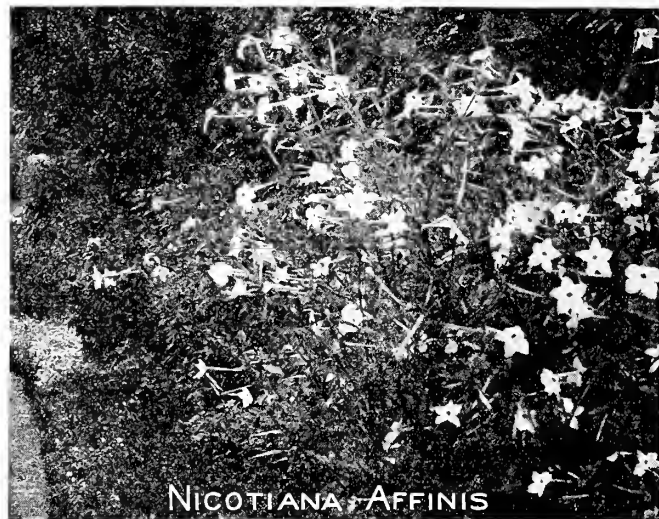
For ease of culture, duration of bloom, brilliancy of coloring and general excellence nothing excels Nasturtiums. All they need is a moderately good soil in a well-drained, sunny position, and within a few weeks from the time they are sown until hard frost comes there is an endless profusion of their gorgeous blossoms. No annual will produce such a lavish profusion of flowers for so long a time, with the same small outlay of time and labor. The maximum of bloom is produced in light or sandy soils and seldom diminishes through the hot weather. The varieties offered below were selected from a very large number of sorts as the best and most distinct.

It is our intention that every package of seed, large or small, that bears the name of Sterling, shall be the best that money can procure anywhere at any price. Our mixtures of Dwarf and Tall Nasturtiums are shining examples of Sterling excellence as applied to flower seeds. These mixtures are made up by ourselves from the finest named varieties grown by the leading specialists of England, France, Italy, and America. They embrace every desirable color, such as deep brown, red, golden-orange, flaming scarlet, chrome-yellow veined with carmine, burnished bronze color, crimson-scarlet, sulphury-yellow, spotted deep chocolate, light straw, delicate shades of rose, and many other colors, tints, and markings.

Our Sterling Mixture of Tall Nasturtiums should not be confounded with the common type. In this mixture are also included all the choicest colors of the climbing varieties. The color combinations in the flowers are superb, a wealth of rich maroon, crimson, scarlet, magenta, and claret shades, marbled and mottled, streaked, spotted and splashed with white, cream, pink, and rose. These climbing Nasturtiums are especially adapted for covering verandas, trellises, trees, stumps, etc.



Nasturtium



NICOTIANA AFFINIS

## Tom Thumb, Dwarf or Bedding Nasturtiums.

**3060. Northrup, King & Co.'s Sterling Mixture of Dwarf Nasturtiums.** Pkt., 5c; oz., 15c; ¼ lb., 50c.

Price; any of the following varieties; Pkt., 10c; oz., 25c; ¼ lb., 75c.

- 3065. Crystal Palace Gem. Orange-yellow, garnet blotches.
- 3067. Chameleon. Various richly colored flowers on same plant.
- 3070. Empress of India. Crimson, dark foliage.
- 3072. Golden King. Golden-yellow, dark foliage.
- 3075. King of Tom Thumbs. Scarlet, dark foliage.
- 3077. King Theodore. Crimson-maroon, dark foliage.
- 3080. Pearl. Creamy-white.
- 3082. Yellow Prince. Pale yellow, carmine blotches.
- 3085. Regelianum. Deep purplish-crimson.
- 3087. Rose.
- 3090. Spotted. Golden-yellow, spotted garnet.
- 3092. Vesuvius, or Salmon Queen. Rich deep apricot.

## Tall or Climbing Nasturtiums.

Elegant climbers for verandas, trellises, etc. Useful to cover unsightly railings and trails over rough ground with fine effect. Gather seed pods for pickling while green and tender. 6 to 10 feet.

**3095. Northrup, King & Co.'s Sterling Mixture of Tall or Climbing Nasturtiums.** Pkt., 10c; oz., 15c; ¼ lb., 50c.

Price; any of the following varieties:—pkt., 10c; oz., 20c; ¼ lb., 60c

- 3100. Chameleon. Various richly colored flowers on the same plant.
- 3102. Gold Garnet. Orange-yellow, garnet blotches.
- 3105. King Theodore. Crimson-maroon, dark foliage.
- 3108. Orange. Pure orange.
- 3110. Pearl. Creamy-white.
- 3112. Yellow Prince. Pale yellow carmine blotches.
- 3115. Rose.
- 3118. Scarlet.
- 3120. Vesuvius, or Salmon Queen. Rich, deep apricot.

## Lobb's Climbing Nasturtiums.

Not to be confounded with the common tall Nasturtiums, far surpassing them in the remarkable brilliancy of the flowers. These are much larger than those of the old-fashioned kind, and usually the petals overlap. Climbing Nasturtiums are adapted for verandas, trellises, etc.

**3125. Finest mixed colors.** Pkt., 10c; oz., 20c; ¼ lb., 60c.

Price; any of the following varieties; pkt., 10c; oz., 25c; ¼ lb. 75c.

- 3130. Asa Gray. Primrose yellow, almost white.
- 3132. Atropurpureum. Deep crimson.
- 3135. Brilliant. Dark scarlet.
- 3138. Deep Blood-red.
- 3140. Giant of Battles. Sulphur, blotched-red.
- 3142. Regina. Brilliant salmon-red on opening, changing as they age to almost a cream color.
- 3145. Roi Des Noirs. (King of the Blacks) Deep velvety garnet; very rich.
- 3148. Spitfire. Brilliant scarlet.

A careful selection of varieties for planting in the home garden will provide a continuous supply of flowers throughout the season. Lists of flowers most useful for succession, as well as those best adapted for cutting, for vines, and for window boxes, are given in our Hand Book For The Garden, sent free with orders when requested.

## N. K. & Co.'s Flower Seeds In Bulk or Packets.

Varieties of N. K. & Co.'s flower seeds which are most in demand are on sale in the Sterling Seed Boxes which are displayed in the stores of about 25,000 dealers throughout the country. We have found that it is to the advantage of many dealers who handle our packets to also sell our garden seeds in bulk. The same quality prevails—no better seeds offered at any price.

# NORTHROP, KING & CO.'S PANSIES IN MIXTURES.

## 3150. Northrup, King & Co.'s Sterling Mix-

**ture.** A mixture of Pansies, unrivaled for diversity of coloring and marking. This mixture is made up from finest named varieties grown by Pansy specialists of the Old and New World. In making up this mixture, expense is not regarded. Our aim is to possess the finest mixture of Pansies obtainable. We have never seen its equal. The diversity of coloring and marking is almost beyond belief. We will cheerfully return money paid for this mixture to anyone who says it is not the finest he ever saw. Pkt., 25c; 1000 seeds, 75c.

## 3155. Northrup, King & Co.'s Bedding Mixed.

Composed of many standard sorts; admirably suited for beds or borders, strong growing plants, very free-blooming. Pkt., 15c; ¼ oz., 50c.

## 3160. Bugnot's Superb Blotched.

Extra large flowers, charming brown-red and bronze shades. Pkt., 25c.

## 3165. Northrup, King & Co.'s Giant Fancy.

While all the Pansies in our Sterling Mixture are large, we do not include in its make-up many of the giant sorts, for, as a rule, many of our customers prefer to buy them separately. Great improvement has taken place within the last two or three years, however, in the character of the largest Pansies. Our Giant Fancy is the finest mixture of the large varieties. For this is used only the seed from the very choicest blossoms. It includes many of the newest productions of famous growers. Pkt., 25c ¼ oz., 75c.

## 3170. Cassier's Three and Five Blotched Giants.

Mostly delicate light shades with dark blotches. Pkt., 25c.

## 3175. Cassier's Five Blotched Giants.

Magnificent mixture. Pkt., 25c.

## 3180. Large Stained Parisian.

White or yellow shades with five striking blotches, very fragrant. Pkt., 25c.

## 3185. Masterpiece.

A remarkable type, the border of each petal being much curled or ruffled, so the flower appears to be double. Pkt., 25c.

## 3190. Orchid Flowered Mixture.

A new race showing beautiful tints of cream, pale mauve, blush, rose, primrose, with brown or golden yellow blotches which diffuse into rays or veins near the edge. The upper petals are plaited, resembling Orchids. Pkt., 25c.

## 3195. Odier's Five Blotched.

Seed gathered only from especially selected, show plants. Extra large yellow and white flowers. Pkt., 25c.

## Giant Flowering Pansies.

- |       |   |      |
|-------|---|------|
| 3200. | All colors mixed  | Pkt. |
| 3205. | Adonis. Light blue with a white center  | 15c. |
| 3206. | Auriculæflora. Superb mixed metallic shades   | 15c. |
| 3207. | Canary Yellow. Dark eye. Large beautiful yellow with three black blotches on frilled petals   | 15c. |
| 3208. | Cardinal. Of all so-called scarlets this is the nearest to a bright red                       | 15c. |
| 3209. | Comet. White porcelain with fine blue or violet stripes on lower petals                       | 15c. |
| 3210. | Columbia. Ultramarine blue with large blotches of violet                                      | 15c. |
| 3211. | Eros. Velvety chestnut, with broad golden border  | 15c. |
| 3212. | Faust or King of the Blacks. Darkest Pansy known, almost black                                | 15c. |
| 3213. | Fire King. Upper petals bright reddish brown, on lower ones a dark blotch with yellow margin  | 15c. |
| 3214. | Freya. Deep purple, edged with silver   | 15c. |
| 3215. | Golden Five Spotted. Strikingly handsome  | 15c. |
| 3216. | Golden Yellow. Dark eye   | 15c. |
| 3217. | Hortensia-Red. Beautiful light rose   | 15c. |
| 3218. | Light Blue. Azure blue with dark eye  | 15c. |
| 3219. | Lord Beaconsfield. Deep purple violet, shading to white on upper petals                       | 15c. |
| 3221. | Mme. Perret. Various shades of pink and rose. Very free flowering, extra large                | 15c. |
| 3222. | Peacock. Upper petals steel blue, remainder are deep claret with white margins. Very striking | 15c. |
| 3223. | Pres. Carnot. Pure white with five deep violet blotches                                       | 15c. |
| 3224. | Pretiosa. Purple blotch on crimson background, pure white edge. Large flowered, curled        | 15c. |
| 3225. | Pres. Lincoln. Golden-bronze  | 15c. |
| 3226. | Pres. Washington. Deep purple with golden bronze centre, edged scarlet and yellow             | 15c. |
| 3227. | Pres. Wilson. Dark blue   | 15c. |
| 3228. | Psyche. Exquisite velvety violet blotches, margined with white. Frilled petals                | 15c. |
| 3229. | Snow Queen. Large satiny white, light yellow center   | 15c. |
| 3231. | Striped. Mahogany with white stripes  | 15c. |
| 3232. | Victoria. Claret red, nearly a blood-red  | 15c. |
| 3233. | Vulcan. Magnificent deep red, with five very large black spots on frilled petals              | 15c. |
| 3234. | White with Eye. Large blossom with purple eye   | 15c. |
- Collection. Giant Flowering Pansies. 12 distinct varieties, \$1.50 postpaid.

## Pansy Culture.

For Spring plants the seed may be sown broadcast from July to September. Cover the seed very lightly with fine soil and press in with a board; then mulch the seed bed with long, loose, strawy manure, to a depth of 3 or 4 inches. The seed will be up in about 10 to 15 days; then remove the straw a little at a time. Transplant the seedlings to beds or frames in September or October and after a sharp frost, late in November or early December, provide a light or loose mulch of hay, straw or litter. The seed may also be sown indoors in January or February; or in Spring in the open ground, in a shady, cool spot where the plant can be protected from the strong mid-day sun. The soil should be very rich and liberal applications of bone meal should be given from time to time.

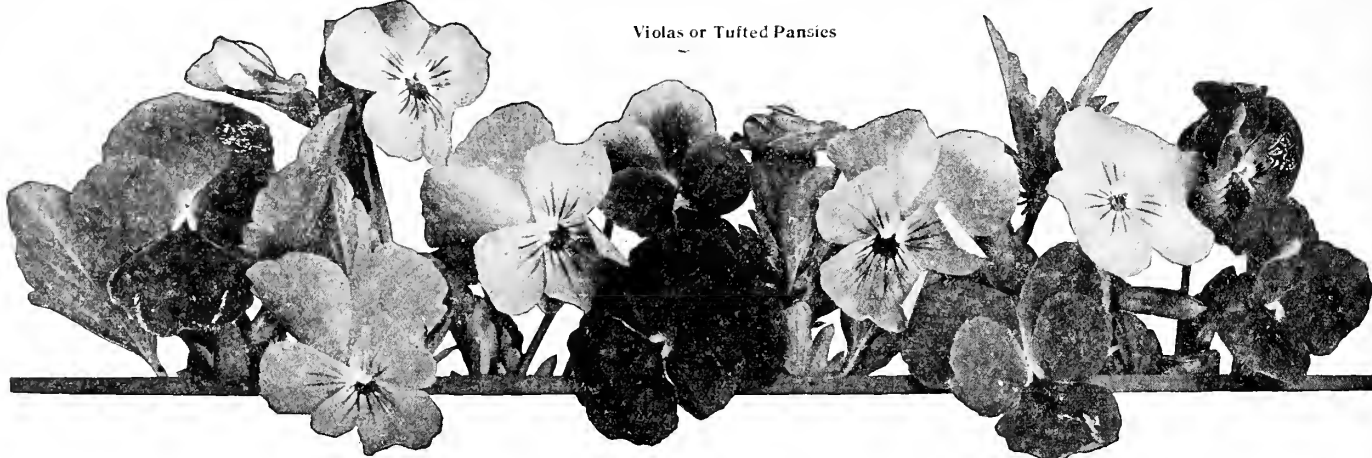
Hot-beds will be found exceedingly useful for raising Pansies. In case the plants have not been wintered over, the seed may be sown in March, following the directions given above except that the straw mulch may be omitted. In about five or six weeks from the time of sowing, the young plants should be transplanted in the beds so they will be two or three inches apart each way, and later they can be set out in the garden. These beds are also very convenient for wintering over the young plants that are started in the late Summer, as indicated above.

Pansies usually commence to flower in from seventy to eighty days from the time of sowing, under reasonably favorable conditions. They are natives of Western Europe where the climate does not have such extremes of temperature as ours. Consequently they do best in cool growing weather such as usually occurs in the Spring or late Summer and Fall.

Types of  
Northrup, King & Co.'s  
Sterling Pansy Mixture.



Violas or Tufted Pansies



## PETUNIA.

The Petunia is peerless among annuals for effective Summer bedding or window boxes. It is of easy culture, early to blossom and continues all the Summer until frost. No other flower produces a greater diversity of color, or retains its freshness for so long a period. The doubles may be perpetuated, by cuttings in late Summer, for Winter house plants. Provide good soil and a sunny location. We have prepared these mixtures with the greatest care, and know that they are especially fine.

### 3240. Northrup, King & Co.'s Extra Large



**Flowering Petunias.** This mixture embodies all of the latest varieties, and will prove an agreeable surprise even to those who expect much. All odd and notable kinds, black, crimson, white with yellow throats, marbled, veined, striped, variegated, etc. Mixed colors  $\frac{1}{4}$  oz., 75c; pkt., 15c.

**3245. Fine Mixed.** Excellent for bedding; many splendid colors.  $\frac{1}{4}$  oz., 50c; pkt., 10c.

**3250. Giants of California.** The "Giants of California" bear gigantic flowers often five or more inches in diameter, of an astonishing variety of colors. They embrace every conceivable shade of crimson, pink, lavender, yellow, black, pure white, etc. One of the chief points of excellence is the deep throat and diversity of veining in the throat. Many of the flowers have a clear yellow throat, while others have a pure velvety black one, so deep that it seems to show no veining; many are deeply lined and netted on a white, pink or lavender ground. Many flowers are beautifully ruffled and frilled. Our strain is unexcelled, being saved especially for our critical trade by a leading Petunia specialist. Pkt., 50c.

**3255. Rosy Morn.** Of compact growth covered completely with beautiful flowers one and one-half inches in diameter. The throat is silvery white, while the edge is heavily flushed with soft rosy pink. Very desirable for beds or borders.  $\frac{1}{4}$  oz., \$1.25; pkt., 25c.

**3260. Dwarf Inimitable.** Striped and Blotched. Compact-growing variety; very effective in masses.  $\frac{1}{4}$  oz., 75c; pkt., 15c.

**"BALCONY" PETUNIAS** A splendid free-flowering type of Single Petunias, growing about 12 inches high, with flowers averaging 3 inches across; of special value for window or porch boxes and vases, but equally as effective in beds or borders.

**3265. Balcony Blue.** Rich, velvety indigo-blue.  $\frac{1}{4}$  oz., \$1.00; pkt., 25c.

**3270. Balcony Rose.** Very effective brilliant rose-pink  $\frac{1}{4}$  oz., \$1.00; pkt., 25c.

**3275. Balcony White.** A splendid pure white.  $\frac{1}{4}$  oz., \$1.00; pkt., 25c.

**3280. Supberb Large-flowering Fringed.** Seed saved from the finest flowers; of very large size and beautiful shape; deep-throated and of varied and brilliant colors, and beautifully fringed. Pkt., 25c.

**3285. Snowball.** A fine compact sort, with pure satiny-white flowers  $\frac{1}{4}$  oz., 50c; pkt., 15c.

**3290. Pure White.** Desirable for cemetery beds or where large masses of white are wanted, grows 12 to 15 inches high. Where a more compact sort is wanted we recommend "Snowball."  $\frac{1}{4}$  oz., 35c; pkt., 10c.



Balcony Petunia

## VIOLAS OR TUFTED PANSIES.

They are a remarkably free-blooming, hardy annual, especially adapted to shady places. The flowers are not so large as the other varieties of Pansies offered on page 53, but they blossom much more freely. Where mere color effect is wanted they are superior to Pansies. Used in masses or as border plants they are fine for edging walks or beds of taller blossoms.

Seeds sown in March or early April produce flowering plants in June, which are a mass of bloom from then until frost.

3295. Finest Mixed Colors.	$\frac{1}{4}$ oz., 60c; pkt., 15c.
3310. Blue Perfection. Deep purplish blue.	Pkt., 15c.
3312. White Perfection. Pure white.	Pkt., 15c.
3315. Mauve Queen. Lilac-blue.	Pkt., 15c.
3317. Firmament. Sky blue.	Pkt., 15c.
3320. Thuringia. Charming variety. Dark violet blue, white eye.	Pkt., 15c.
3325. Purple Queen. Rich purple.	Pkt., 15c.

### Viola odorata. Sweet Scented Violet.

The deliciously fragrant, old-fashioned bouquet flower. It was popular in our Grandmothers' day and is still a favorite everywhere; a splendid hardy perennial. Violets are easily grown from seed, doing best in a cool, moist, partially shaded situation. The seeds being hard shelled often take several weeks to come up. Any of the following, 15c per packet.

3330. Blue. 3335. White. 3340. Mixed, blue and white.

### Classification of Flowers

**Annuals.** Plants which live but one year.

**Biennials.** Plants which live for two years.

**Perennials.** Plants which live more than two years.

**Hardy Annuals.** (Early Blooming) Sow seed of this class in the early Spring soon as weather becomes settled.



Northrup, King &amp; Co.'s Extra Large Flowering Petunia.

**Culture.** Sow in May when the ground is warm, in the bed or border where they are to flower. The soil should be well pulverized and the seeds covered to a depth of 4 times their size. Firm with a board, and thin out so that the plants will not become crowded. For early flowering sow indoors in a shallow box, or in a hotbed, and transfer to open ground when the weather becomes suitable.

The weaker Petunia seedlings should be carefully saved. With attention these small seedlings develop splendidly and frequently produce the finest double flowers.



**Phlox Drummondii.** Of all Summer-flowering annuals the varieties of Phlox Drummondii are unquestionably some of the most brilliant and satisfactory. Seed may be sown in the open ground any time after danger of frost is past, and in a few weeks the beds or borders are aglow with their brilliant coloring and remain so until cut down by frost. For early flowering they should be started indoors or in a hotbed.

**Grandiflora Varieties.** Large Flowering. The following six colors are considered the brightest, best and most distinct for bedding:

- |  |                                   |
|--|-----------------------------------|
| 3350. Pure White..... Pkt., 15c                              | 3360. Crimson Beauty... Pkt., 15c |
| 3352. Shell Pink..... " 15c                                  | 3362. Royal Purple..... " 15c     |
| 3355. Deep Rose..... " 15c                                   | 3365. Blood Red..... " 15c        |
| 3370. Grandiflora, Choicest Mixed. ¼ oz., \$1.00; pkt., 15c; |                                   |

**Large Flowering Dwarf Varieties.** A type combining the size of the individual flower and head of the finest Grandifloras, but of dwarf, compact growth, a perfect combination; and while they do not come in the large range of colors found in the taller-growing type, the colors offered will be found very effective for beds, borders, etc.; 8 inches.

- |   |                                  |
|---|----------------------------------|
| 3375. Finest Mixed Colors. ¼ oz., 75c; pkt., 15c. | 3380. Brilliant Rose. Pkt., 15c. |
| 3382. Fiery Scarlet. Pkt., 15c.                   | 3385. Pure White. Pkt., 15c.     |

**3390. Star Phlox.** (Star of Quedlinburg.) Of dwarf habit with very pretty star-shaped flowers. Mixed colors. ¼ oz., 75c; pkt., 15c.

**3395 Physalis Franchetti.** Japanese Winter Cherry. Fruit large, deep red color, edible, and enclosed in balloon-shaped husks of brilliant orange red. Hardy annual; height two feet. An ornamental variety of the Ground Cherry or Strawberry Tomato. Pkt., 10c.

**Portulaca. (Sun Plant.)** One of our finest annual plants, of easy culture, thriving best in a rather rich, light loam or sandy soil, and luxuriating in an exposed sunny situation; the flowers are of the richest colors, and produced throughout the summer in great profusion. Fine for massing in beds, edgings or rock-work, and frequently used to mix the seed with three or four times its bulk of dry sand or soil, which permits an even and easy distribution of the seed; 6 inches. Will grow and bloom abundantly all Summer in a dry, hot location, where most other plants would soon die.

- |   |                                  |
|---|----------------------------------|
| 3400. Single Orange. Pkt., 10c.                   | 3407. Single Scarlet. Pkt., 10c. |
| 3402. Single Striped. Pkt., 10c.                  | 3410. Single White. Pkt., 10c.   |
| 3405. Single Rose. Pkt., 10c.                     | 3412. Single Yellow. Pkt., 10c.  |
| 3415. Single Mixed Colors. ¼ oz., 50c; pkt., 10c. |                                  |

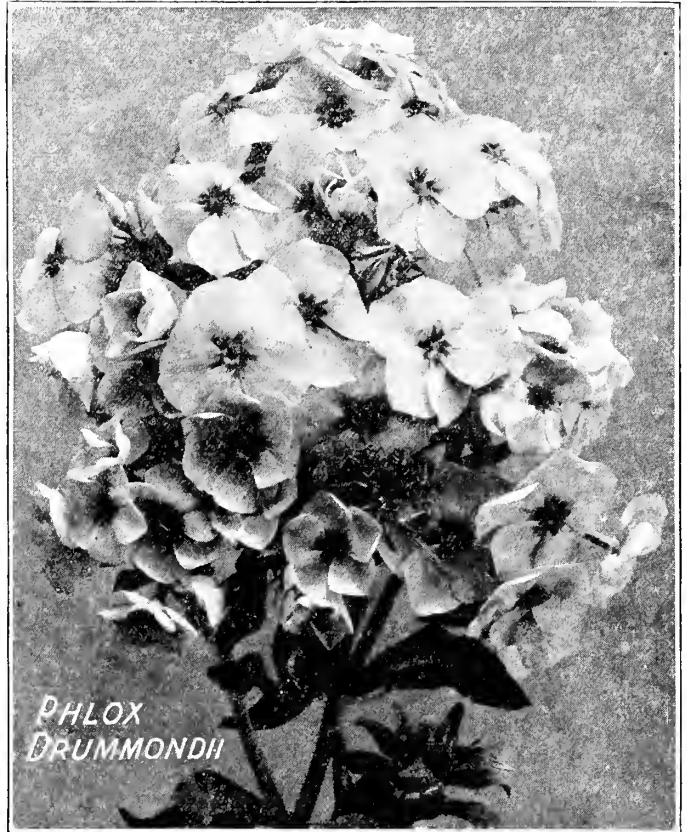
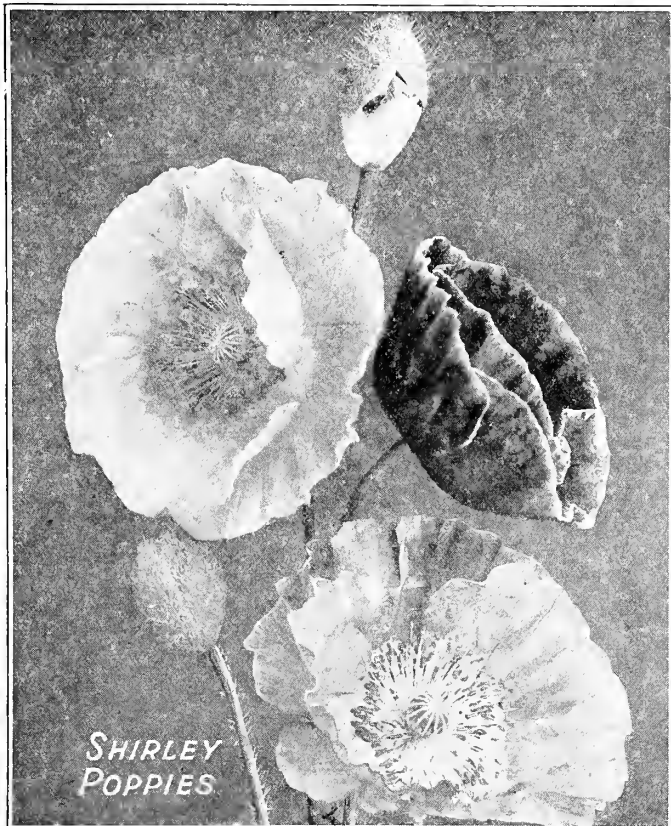
**3418. Double Mixed.** A large percentage of flowers will come perfectly double, of the most brilliant scarlet-crimson, white, yellow, etc. ¼ oz., \$1.00; pkt., 15c.

**3420. Parana.** This new giant-flowered type from South America produces immense, single blossoms often 3 inches across, bright ruby red in color. They are of very vigorous growth and flower profusely. Pkt., 15c

## POPPIES

In color and form, Shirley Poppies are the daintiest, most exquisite blossoms imaginable. Poised on long stems like graceful birds they appear to be hovering but a moment before darting away. Their silken gossamer petals vary in shade from scarlet and maroon to pale rose and white.

The blossoming period lasts but a few weeks, which necessitates repeated sowings at intervals for constant bloom. Sow as early in the Spring as possible where the plants are to remain, as they do not bear transplanting. When planted with Bachelor's Buttons they make a charming combination bed. As cut flowers they are short lived but if their stems be dipped in boiling water right after gathering, they will last much longer.



## Poppies Do Last

There seems to be a mistaken idea prevalent regarding the lasting qualities of Poppy flowers, the general impression being that only a touch is needed to cause the petals to drop when, as a matter of fact, newly opened flowers, picked and put into water without any unnecessary delay, will keep fresh for several days; in fact they can be worn on the person, standing as much shaking about as many other flowers.

There is no reason why the natural flowers of Poppies should not be worn on Memorial Day.



## Single Annual Poppies.

**3425. Northrup, King & Co.'s Sterling Single Mixture.** Embraces all the leading best single varieties. As is always the case with our Sterling Mixture, it has been our aim to include in this mixture every good variety. Oz., 25c; pkt., 5c.

**3430. Shirley.** The flowers are large, exceedingly graceful and elegant; the colors are pure, soft and varied and range from bluishwhite, rose, delicate pink and carmine, through innumerable tints, to bright sparkling crimson. Oz., 50c; pkt., 10c.

**3435. Shirley "American Legion."** This new single Shirley is a dazzling orange scarlet of enormous size, borne on long stout stems. The plants are of very erect robust growth. ¼ oz., \$1.00; pkt., 25c.

**3437. Danebrog, or Danish Cross.** Very showy variety, producing large single flowers of brilliant scarlet, with a silvery-white spot on each petal, thus forming a white cross. Oz., 25c; pkt., 5c.

**3440. Admiral.** A single peony-flowered variety of surpassing beauty, having large, smooth-edged flowers of glistening white, with a broad band of brilliant scarlet around the top. These two colors form a striking contrast, and when planted in groups produce a magnificent effect. ¼ oz., 20c; pkt., 5c.

**3442. Scarlet Flanders.** Dazzling scarlet. Oz., 75c; pkt., 10c.

**3445. Charles Darwin.** Remarkable for the unique colors of its large, smooth-edged flowers, being a striking rich dark purple; with a velvety black spot at the base of each petal. A dense wreath of white anthers produces a fine contrast with the extraordinary colors of the flower. ¼ oz., 25c; pkt., 10c.

**3447. Tulip Poppy.** A magnificent species from Armenia. The plants grow about 14 inches high and produce from 50 to 60 large tulip-like flowers of dazzling scarlet. ¼ oz., 35c; pkt., 10c.

**3450. King Edward.** A new variety of gorgeous coloring, being a deep scarlet, shaded crimson-red each petal marked with a large black blotch for half its length from the base, against which the yellow anthers stand out in bold relief. The plant grows 2½ feet high, and produces its very large flowers with great freedom. ¼ oz., 25c; pkt., 10c.

**3452. The Bride.** A beautiful large, single pure white. oz., 30c; pkt., 5c.

**3455. Virginia.** Large beautifully fringed flowers of pure white, edged with soft pink; exquisite when cut. ¼ oz., 20c; pkt., 5c.

Poppies Continued on Next Page

Judicious planning of flower beds and borders will greatly add to the appearance of the home. Flowers soften the harshness of outline and provide artistic combinations of form and color. Home building is never complete until plans for lawn and flower beds are harmonized with the architecture.



Salvia Splendens

## Double Annual Poppies.

Beautiful fringed blossoms on strong, vigorous stems. Double Poppies make splendid cut-flowers. Striped, tinted and shaded, they resemble big lacey rosettes.

The flowering period of Double Poppies is very much longer than that of the Single Shirleys and the plants need more space to develop to perfection.

### 3460. Northrup, King & Co.'s Sterling Double Mixture.



Includes all of the best double varieties of large-flowering Poppies of all colors; also many varied tints and combinations of color. Many of the blossoms are 6 to 7 inches in diameter and as double as Peonies, 30 to 36 inches high. They are fine for cut-flowers or garden display. Oz., 35c; pkt., 5c.

**3465. American Flag.** Beautiful variety; flowers very large and double, snow white, bordered with scarlet. Oz., 30c; pkt., 5c.

**3467. Fairy Blush.** Very double flowers of pure white, elegantly fringed and tipped with rose. Oz., 30c; pkt., 5c.

**3470. White Swan.** Immense double flowers; beautifully fringed and of purest white. Oz., 30c; pkt., 5c.

**3472. "Mikado" (The Striped Japanese Poppy.)** This beautiful Poppy is very distinct in character and color. The flowers are brilliant scarlet and white with elegantly curved petals, like a Japanese Chrysanthemum. Oz., 30c; pkt., 5c.

## (Double Annual Poppies. Continued.)

**3475. Carnation Flowered.** Splendid, double, fringed flowers. Mixed colors. Oz., 25c; pkt., 5c.

**3477. Peony Flowered.** Large, showy, double, globular flowers, resembling a double Peony. Mixed colors. Oz., 25c; pkt., 5c.

**California Poppy or Eschscholtzia.** See page 49.

**3480. Pyrethrum Aureum. Golden Feather.** Very popular plant for edging, carpet-bedding, etc.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**Ricinus. Castor Oil Bean.** Ornamental plants of stately growth and picturesque foliage, with brilliant colored fruit, producing a sub-tropical effect; fine for lawns, massing or center plants for beds.

**Culture.** Sow out of doors, when danger from frost is over, in the bed or border where they are to flower. The soil should be well pulverized and the seed covered to a depth of about four times their size. Press down firmly with a board, and thin out so that the plants will not become crowded. For early flowering they should be started indoors in a shallow box, or in a hotbed.

**3485. Sanguineus.** Blood red stalks and clusters of red fruit; 8 ft. Oz., 50c; pkt., 5c.

**3487. Cambodensis.** The main stem and leaf stalks are shining ebony leaves large, regularly divided and richly colored; 5 feet. Oz., 25c; pkt., 5c.

**3490. Zanzibariensis.** Have light and dark green leaves and some of coppery bronze changing to dark green with reddish ribs. Oz., 25c; pkt., 5c.

**3495. Mixed.** All sorts, best varieties. Oz., 20c; pkt., 5c.

**3500. Rudbeckia Bicolor Superba. Cone Flower.** Fine flowering annual variety, growing about 2 feet high; forming a dense bush and producing in great abundance on long stems its bright flowers. The disk is brown, the florets golden-yellow, with large velvety-brown spots at the base; very effective and useful for cutting.  $\frac{1}{4}$  oz., 25c; pkt., 10c.

**Salpiglossis. Painted Tongue.** Very beautiful hardy annual plants, flowering freely from July to early Autumn. Rich soil should be provided, with plenty of space for plants to develop.

**3505. Large Flowering Mixed.** The exquisite beauty of the flowers with their rare combination of color, is a revelation to all who may see them for the first time. A splendid variety of color, flowers of large size.  $\frac{1}{4}$  oz., 50c; pkt., 10c.

**3510. Emperor.** This new variety forms only one leading stem, and bears on its summit a veritable bouquet of the most beautiful flowers, each one richly veined with gold, and much larger than the finest of the "Grandiflora" type.  $\frac{1}{4}$  oz., 75c; pkt., 15c.

**Salvia. Scarlet Sage.** One of the handsomest flowering plants we have for garden decoration. For early flowering, plants should be started indoors in a shallow box, or in a hotbed.

**3515. Salvia Splendens.** Excellent for filling large beds or borders in the garden; continuously in bloom from early August until the first killing frost. Beautiful scarlet; large flowering.  $2\frac{1}{2}$  ft. high.  $\frac{1}{4}$  oz., 75c; pkt., 10c.

**3520. Clara Bedman. (Bonfire.)** The plants form handsome, globular bushes about two feet in diameter. The dazzling scarlet spikes grow upright and stand clear above the foliage, enveloping the plant.  $\frac{1}{8}$  oz., 60c; pkt., 15c.



Ricinus. Castor Oil Bean



Cut-And-Come-Again Stocks

**3525. Scabiosa. Mourning Bride.** One of our handsomest Summer border plants, producing in great profusion very double flowers in a variety of shades and colors. Excellent subjects for cut flowers, lasting nearly a week after being cut. Sow the seeds in May and thin out the young plants to 6 inches apart. Mixed, oz., 75c;  $\frac{1}{4}$  oz., 25c; pkt., 5c.

**Stocks. Gilliflower.** This Stock is one of the most popular annuals, either for bedding or pot culture; for brilliancy and diversity of color, fragrance, profusion and duration of bloom it is unsurpassed. Start the seeds in February and March, and as soon as the plants have their second pair of leaves, prick out into shallow boxes and in about four weeks the plants will be ready to pot; from which they should be transferred to the open ground in May or June.

**Large Flowering Ten-Weeks Stock.** This is the leading class for bedding out or Summer blooming.

- |  |                                 |
|--|---------------------------------|
| 3530. Blood Red. Pkt., 10c.  | 3537. Bright Pink. Pkt., 10c.   |
| 3532. Purple. Pkt., 10c.   | 3540. Pure White. Pkt., 10c.    |
| 3535. Light Blue. Pkt., 10c.   | 3542. Canary Yellow. Pkt., 10c. |
| 3543. Mixed Colors. $\frac{1}{2}$ oz., 50c; pkt. 10c.                  |                                 |
| 3545. Collection, 6 separate colors, one packet of each for . . . 50c. |                                 |

### Cut-And-Come-Again 10-Week Stocks Giant Perfection Perpetual Branching.

Splendid perpetual-blooming class; sown in March or April they begin flowering in July, continuing till frost, and are especially valuable during September and October, when other flowers are scarce; they throw out numerous side branches, all bearing very double, fragrant flowers.

3550. Princess Alice. White. Pkt., 15c.  
 3552. La France. Rose. Pkt., 15c.  
 3555. Brilliant. Blood-red. Pkt., 15c.  
 3557. Sapphire. Violet. Pkt., 15c.  
 3560. Creole. Yellow. Pkt., 15c.  
 3562. May Queen. Delicate Lilac. Pkt. 15c.  
 3565. Finest Mixed. All Colors  $\frac{1}{2}$  oz., \$1.00; pkt., 15c.

### 3570. Saponaria Vaccaria Rosea.

Bouncing Bet. A pretty and useful annual variety, grows about 2 feet high, and bears masses of satiny pink flowers somewhat like an enlarged Gypsophila; charming for cutting, adding grace to any arrangement of flowers. Several sowings should be made to keep up a succession of bloom.  $\frac{1}{4}$  oz., 25c; pkt., 5c.

### 3575. Sanvitalia. Procumbens

Fl. Pl. An annual of dwarf compact growth; useful in masses in beds, or edges of borders, or in vases, baskets, etc. Showy bright yellow, double flowers; in bloom all summer.  $\frac{1}{2}$  oz., 60c; pkt., 15c.

**3580. Stevia Serrata.** Free-blooming plants, bearing a multitude of fragrant pure white flowers; suitable for summer or winter blooming; largely used for cutting.  $\frac{1}{4}$  oz., 75c; pkt., 10c.

**3585. Tagetes Signata Pumila.** A dwarf, compact, bushy annual Marigold, with beautiful, delicate, fern-like leaves, densely covered with flowers of bright golden-yellow; a first-class borderplant.  $\frac{1}{4}$  oz., 75c; pkt., 15c.

**3590. Torenia Fournieri.** A very fine annual; a splendid plant for vases, hanging-baskets, borders, etc.; covered the entire season with a mass of bloom. Sky-Blue, with three spots of dark blue, bright yellow centre.  $\frac{1}{4}$  oz., 50c; pkt., 15c.

### 3600. Northrup, King & Co's Garden Flower Mixture.

The beauty of this mixture lies in the great variety of flowers it contains. It embraces not only all the best known and most popular annuals, but a great many new and rare sorts, gathered especially for this mixture. It has attracted wide and favorable attention wherever grown. Oz., 25c; pkt., 5c.

### VINCA. Madagascar Periwinkle, or Old Maid.

Ornamental free-blooming plants; splendid for bedding; dark, glossy foliage and handsome pink and white flowers. It is best to start seed early indoors or in a hotbed. Seed germinates slowly. Plants can be potted in the Autumn and kept in bloom all Winter.

3605. Alba. Pure white. Pkt., 10c.  
 3607. Rosca. Rose, dark eye. Pkt., 10c.  
 3610. Mixed, all colors.  $\frac{1}{4}$  oz., 50c; pkt., 10c.

### Ornamental Foliage Plants Grown from Seed.

Amaranthus	Kochia
Canna	Marvel of Peru
Coleus	Pyrethrum
	Ricinus

### Fragrant Flowers from Seed.

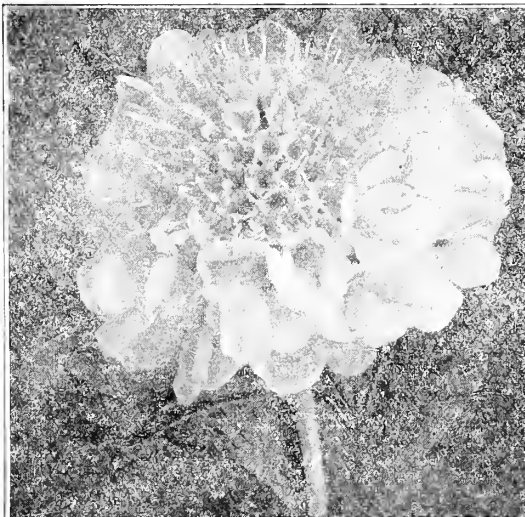
Alyssum	Nicotiana
Carnations	Petunia
Cyclamen	Pinks, H. P.
Dianthus, Hardy	Scabiosa
Heliotrope	Stocks
Lavender	Sweet Peas
Mathiola	Sweet Sultan
Mignonette	Sweet William
Mimulus	Verbena, Lemon
	Wallflower

### Drooping Plants for Vases, Hanging Baskets, etc.

Alyssum	Petunia
Calendula	Torenia
Lobelia	Verbena
Nasturtium, Tall	Vinca

### Flowers For Permanent Planting.

On pages 64, 65, 66, 67 and 68 are listed the choicest varieties of Hardy Perennials. Follow the directions at top of page 64 and these varieties can be expected to continue in the same place for years, bringing cheer and color to your garden.



Scabiosa



## SWEET PEAS

### Northrup, King & Co.'s Selection of Spencer or Orchid-Flowered Sweet Peas.

The following varieties represent the most beautiful of all Sweet Peas to date, the greatest advance in Sweet Peas in a decade. We urge all Sweet Pea lovers to plant our superb Spencer or Orchid-Flowered Sweet Peas.

Spencer Sweet Peas under favorable conditions, show a strong healthy growth. The plants attain a height of six to nine feet, requiring a six inch space for full development. The blossoms are of immense size, measuring 2 to 2½ inches across, with 3 or 4 on a stem. They are beautifully formed with huge standards, open and upright and immense wings gracefully poised. Both standards and wings are delicately waved.

We are satisfied that the newer Spencer Varieties of Sweet Peas are not yet fully appreciated in the United States. The supply of seed of the sorts which we offer below is still very limited but when the seed stock increases and they become better known they will be far more popular. Both in colors and size they represent the latest triumphs of the plant breeder's skill. In these will be found the richest shades from apricot pink to silvery blue, ivory white to royal purple. We trust all our customers will try a few of these beautiful selections this year, that they may enjoy in their own gardens, the Sweet Peas which at home and abroad have received high awards at many Sweet Pea Exhibitions.

### NAMED VARIETIES—SPENCERS.

Price. All of the following varieties are sold at a uniform price. Packet, 10c; oz., 50c; ¼ lb., \$1.50.

Bicolor (Dark)	Magic
Blue	Mrs. Tom Jones
Blue (Light)	Colne Valley
Blue (Dark)	Commander Godsall
Blush (Pink)	Valentine
Blush (Lilac)	Elegance
Carmine	Mascott's Ingman
Cerise (Pale)	Hawlmarm Cerise
Cerise (Deep)	Charming
Cerise (Scarlet)	Royal Scot
Cream	Matchless
Cream Pink (Deep)	Picture
Crimson	Charity
Crimson	Crimson King
Lavender (Rosy)	R. F. Felton
Lavender (Lilac)	Gladys
Marbled and Watered	Helen Pierce Spencer
Maroon (Red)	Splendour
Maroon (Dark)	Warrior
Mauve	Lady Eveline
Orange (Pink)	Geo. Shawyer
Orange (Scarlet)	The President
Picotee Edged (Cream Ground)	Jean Ireland
Picotee Edged (White Ground)	Annie Ireland
Picotee Edged (White Ground)	Youth
Pink (Pale)	Daisybud
Orange Salmon, Cream Pink	Miss California
Pink (Deep)	Hawlmarm Salmon Pink
Purple	Royal Purple
Rose	Sunset
Salmon (Orange)	Tangerine Improved
Scarlet	Hawlmarm Scarlet
Striped and Flaked	Senator
White	Edna May Improved
White (Tinted)	Constance Hinton

### Nitragin for Sweet Peas.

Sweet Peas belong to the legume family and cannot flourish unless they have plenty of bacteria on their roots. These bacteria are necessary to furnish the plants nitrogen, which is one of the important plant foods. Where Sweet Peas have been grown before there will probably be sufficient bacteria in the soil but in other places these may be lacking and Nitragin should be used to supply them.

Nitragin is easy to use. It will not replace fertilizers, but will help you raise healthier more vigorous Sweet Peas.

See page 95 for further information on Nitragin.

### 3725. Northrup, King & Co.'s Sterling Mixture.



The finest and most desirable mixture possible to put together. The acme of richness and beauty, matchless in combinations of colors and giant sweet scented flowers. Every color of the rainbow and an almost unlimited variety of shades, tones and combinations of colors, striped, splashed, mottled and margined. Nothing seems to have been forgotten. It is made up regardless of expense, the aim being to secure in this mixture the largest flowering sorts and the widest possible range of colors. Without doubt this mixture reaches perfection. It is our aim to constantly improve, when possible, by adding new varieties as they are introduced. We include the magnificent Spencers, and the superb Unwins, a mixture, in fact, of which any one may be proud. Pkt., 10c; oz., 25c; ¼ lb., 75c; lb., \$2.50.



### 3720. Northrup, King & Co.'s Giant Orchid Flowering or Spencer Mixture.

Spencer varieties of Sweet Peas have come into general favor so rapidly that the demand has been large for all Spencer sorts in mixture. We have included in this combination nearly all of the Spencers, making it a rare and lasting pleasure to the grower. The vines are strong, healthy and vigorous in growth and produce in wonderful profusion, long and strong stemmed flowers of great beauty, size, perfect form and coloring. Those preferring to grow all sorts together, rather than separate colors, will find this unsurpassed. Pkt., 10c; oz., 25c; ¼ lb., 75c; lb., \$2.50.

**3715. Cupid Dwarf or Bedding Mixed.** Sown as a border they form a line of emerald green foliage a little over a foot wide and from 6 to 12 inches high, and from June until late summer are literally a sheet of bloom and from the fact that they cover the ground so closely they are not so likely to suffer from drought as the tall sorts. Pkt., 10c; oz., 20c; ¼ lb., 60c; lb., \$2.00.

**3730. Grandiflora or Large Flowering Mixed.** Pkt., 5c; oz., 15c; ¼ lb., 40c; lb., \$1.25.

## SWEET PEAS. NAMED GRANDIFLORA.

This is the well known type which has been grown for many years. It comprises two forms, "hooded or shell-shaped," and "open." The Grandifloras are most easily grown and are always popular.

We will furnish the following varieties at a uniform price.

Packet 5c; oz., 15c;  $\frac{1}{4}$  lb., 50c.

3735. **Dorothy Eckford.** Finest white; very large, grand substance.  
 3737. **Hon. Mrs. E. Kenyon.** Clear buff-yellow, spreading flowers.  
 3740. **Janet Scott.** Deep pink, tinged buff, strong grower.  
 3742. **Miss Wilmot.** Deep orange-pink; shaded with rose. Is a plant of very tall, strong growth and exceptional fragrance.  
 3745. **Prima Donna.** Lovely pale pink; the leading pink variety of the type; tendrils colored.  
 3747. **Extra Early Blanche Ferry.** The popular pink and white. Bloom profuse, lasting well on the plant; sunproof.  
 3750. **Lady Griscl Hamilton.** Pale lavender-blue. The best of its color in this type. Moderately vigorous in growth.  
 3752. **King Edward VII.** Bright crimson. This variety represents the acme of crimson-scarlet varieties of the open or the hooded form.  
 3755. **Brilliant Blue.** Richest navy blue. The best dark blue of this type.  
 3757. **Flora Norton.** Beautiful bright blue. Small flower but excellent as a garden variety on account of its unusual color.  
 3760. **Helen Pierce.** Pure white, mottled blue. Distinct. One of the indispensable varieties for a complete collection.  
 3762. **Black Knight.** Very deep maroon, large size and open form. One of the darkest varieties and the best of its color in this type.

## Growing Sweet Peas In Clumps

By CHARLES ELLIOTT

The modern Sweet Pea is the most beautiful and most useful of all our annuals and the growing of it should not be confined to the time-honored practice of the long lines grown for cutting flowers for decoration or exhibition. For some years past I have resorted to many different plans of growing these plants for lawn and garden decoration.

One of the most pleasing of these plans is the planting of Sweet Peas in "clumps" or circles, with end in view of producing large, long-stemmed flowers in a way that proved attractive, and added a good decorative subject to the garden.

These circles, or "clumps," as we term them, consist of two stout stakes and sixteen bamboo canes 8 feet high. We find it an advantage to construct these before planting. Two stakes 8 feet high are driven into the ground, one on each side of a circle 30 inches in diameter. About 5 feet from the ground a wire hoop, made of No. 9 wire, is stapled to the stakes and the bamboos are then placed 5 inches apart around the circle and tied securely to the hoop. At planting-time enough strong plants of a strong-growing variety are planted and one shoot is led up each of the canes and up to each stake. We usually arrange these clumps on either side of the walk, and, if possible, have the twin clump across the walk of the same variety, the clumps being 7 to 8 feet apart from center to center; in the intervening spaces we plant many of our common annuals with very pleasing results. If the Sweet Pea vines are kept disbudbed and given a nice mulch early, they produce some very creditable flowers.

We find these clumps an excellent arrangement for testing novelties, and showing off their good qualities to Sweet Pea enthusiasts. We plant them with "fall-sown" plants whenever possible, since they bloom earlier, and last longer, and produce better flowers. Strong growing varieties gave best results, and we have had many varieties go "over the top" of the 8-foot canes.

## Sweet Peas; Seed-Sowing.

By WILLIAM GRAY

It is a well-known fact that, if conditions are favorable, Sweet Peas sown in the fall give much earlier and finer bloom than those sown in the open in the spring, but few localities are favored with climatic conditions suitable for fall sowings in the open to winter successfully and the practice is a hit or miss even with the most expert growers. Spring sowing in the open has been the general practice followed, and this also has its faults inasmuch as it does not allow sufficient time for the young plants to become thoroughly established before warm weather sets in and in consequence inferior blooms are the result.

The pot method, however, overcomes all these uncertainties, the seed being sown either in the fall or during January or February and wintered in cold-frames or cool greenhouse. If sown in the fall it is best to sow not later than October so that the young plants may become established in the pots before the short days of the year arrive; later sowings will be inclined to weakness owing to the absence of the sunny conditions necessary to build up vigor in plant life, and much better results will be had by waiting until the middle of January when under the influence of longer days with increasing sunlight, strong, vigorous plants can be grown.

The seed may be sown directly in the pots, one seed to each pot or several according to the size of the pots, or the seed may be sown in pans or flats and afterwards transplanted to the pots. If the highest culture is aimed at it is preferable to grow a single plant in each pot, plants grown from fall sowings being carried up to the end of January in 3 or 3½-inch pots, and then given a shift into 5 or 6 inch pots which will carry them through nicely until planting-time in the open ground. On shifting, stick short brush in the pots to keep the plants upright. January and February sowing can be carried through in 3 or 3½-inch pots until planting-time in the open ground.

Plants from fall sowings will bloom earlier and be at their best over a much longer period than January sowings, for the advantage gained lies in the earlier start which brings them into bloom the end of May, being at their best throughout June, a period more suitable to the Sweet Pea. January and February sowings come into bloom about the middle of June, being at their best at the end of the same month and early July, after which, owing to hot weather conditions, stems shorten up and flowers get smaller quickly.

No one, not even the amateur grower, need feel that the growing of the plants is a difficult operation. Fine plants can be grown in a well-protected coldframe in a sheltered position on the south side of a house or other structure that will break the cold winds. A 3 by 6 foot sash will cover sufficient plants to plant a considerable length of row, and will give a wealth of bloom for exhibition or house decoration.

Local florists could find ready sale for plants grown from January sown seed, once their customers tried them out and were delighted with the results from planting plants instead of seed in their gardens.

## SWEET PEA CULTURE.

**Preparation of Soil.** Prepare a trench 2 feet deep and at least 1½ feet wide. Fill in with a mixture of rich loam and well rotted barnyard manure or 5 lbs. of sheep manure and 1½ lbs. of bone meal for each 8 feet of row. Cover with 6 inches of good soil. The manure should be worked in deep down and carefully mixed through the soil at bottom of trench.

The trench should slope gradually towards the center, which is to be 2 inches deeper than the sides.

**Planting.** Should be done the first day the soil is dry enough to work without becoming sticky. If the soil is worked while wet it may ruin the crop.

White Seeded Sweet Peas should not be sown until the ground has thoroughly thawed. Sweet Peas require a long period of slow growth under cool conditions which are necessary for good root formation. Late sown Sweet Peas, especially when planted after May 15th are seldom worth while. Sow 1 lb. of seed for 100 feet of row.

Make a furrow in the center of trench 6 inches wide and 3 deep. Sow the seed in this furrow in two rows, 4 inches apart and 2 inches apart in the row. Cover with about an inch of fine soil and tamp down firmly. If soil is damp and heavy tamp more lightly than if dry and loose. After tamping, rake another inch of soil over seed. Do not cover seed more than 2 inches deep altogether.

**Cultivation.** When vines are 5 inches high, fill up the 4 inches between the rows with fine soil, drawing the soil to each side, covering the vines to within an inch of their tops. Do not cover up the vines entirely. Straighten any crooked plants and remove weeds. After the vines have grown another 5 inches repeat the operation; at this time hoe up the soil outside the rows to a level with the soil around the vines, so that what was originally the trench becomes a ridge.

**Supports.** Never allow vines to fall over, as they can not be properly straightened afterwards, but support with brush, wire netting or strings.

**Mulching.** Before blooming time fill trench between the rows with straw or grass clippings. This will keep the soil cool and moist.

**Watering.** Sweet Peas like plenty of water in dry weather. After blooming begins, fill the trench between the rows with water two or three times a week, if there is a lack of showers.

**Tiling.** Growth and bloom of Sweet Peas will be increased if a line of 3 inch porous drain tile is placed a few inches beneath the trench. By bringing this to the surface with an elbow, water may be readily applied to the roots.

**Cutting.** Should be attended to every day, whether you have use for the flowers or not.

If seed pods are allowed to form, the vines will soon cease blooming. In the afternoon or early evening is the best time for cutting. The flowers being then fully developed and hardened, last much longer in water.

It is only necessary to cut each day the flowers that are fully developed. It is after forming seed pods that they injure the vines.

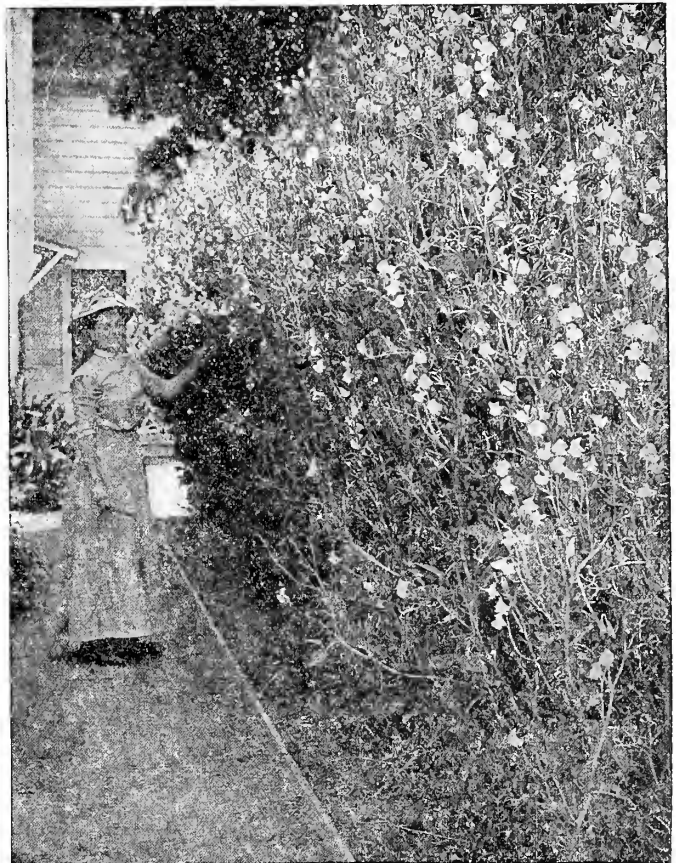
Be careful in cutting not to disturb or break the vines. Carelessness in this will soon ruin them.

It is best not to step too near the vines when picking the flowers as this would pack the soil surface, which should be kept loose and open.

**Enemies.** For slugs and cut worms a little air-slacked lime around the young shoots will protect them more or less and sometimes the worms can be attracted and killed by putting a bunch of cut lettuce or green grass dipped in Paris Green near the Sweet Pea row.

For plant lice or aphids use "Black Leaf 40," Nico-Fume Liquid or some other tobacco extract spray.

Sow 1 lb. of seed for 100 feet of row.



A Fine, Well Grown Row of Sweet Peas.

## VERBENA

**Culture.** Should not be sown in the open ground before latter part of May. The best plan is to start the seeds indoors in a shallow box or in a hotbed, in a temperature of about 65 degrees. Cover the seeds to a depth four times their size and press the surface firm with a board. Water with a fine spray. Transplant the seedlings after the second leaves form and remove to the garden when the weather is warm and settled.

**Northrup, King &**



**Co.'s Mammoth Ver-**

**bena.** The largest known, a single flower

often being as large as a twenty-five cent piece. The beauty of this plant is well known and scarcely needs comment. For garden beds or effective massing the Verbena is unequalled. They bloom profusely, lasting until late in the Autumn. Thrive best in a sweet turfy loam and should be given space to trail over the ground. Verbenas should not be grown in the same place two years in succession.

**3765. Northrup, King & Co.'s Mammoth Mixed.** All colors.  $\frac{1}{4}$  oz., 50c; pkt., 10c.

**3770. Mammoth Lucifer.** A most valuable addition to the range of colors in this important bedding plant, being an even, intense deep cardinal-scarlet throughout with no eye; it is identical to our other Mammoth Verbenas in size of bloom, floriferousness and other good qualities. As a brilliant bed or border plant this will be most satisfactory.  $\frac{1}{4}$  oz., \$1.00; pkt., 25c.

**3775. Mammoth Pink** ..... Pkt., 10c **3780. Mammoth Scarlet** ..... Pkt., 10c

**3776. Mammoth Purple** ..... " 10c **3781. Mammoth Striped** ..... " 10c

**3777. Mammoth White** ..... " 10c **3782. Collection of Mammoth Verbenas,**

**3778. Mammoth Blue** ..... " 10c 6 colors ..... 50c

**3785. Verbena Venosa.** A strong grower, violet flowers. An excellent subject for massing; used very effectively in Loring and other parks in Minneapolis; flowers all Summer ..... Pkt., 10c.

**3800. Verbena, Lemon Scented.** This fragrant plant is easily grown from seed and succeeds well anywhere. Have a good bed of it so that you can cut its fragrant foliage and flowers to make up with bouquets. Pkt., 15c.

## ZINNIA. Youth and Old Age.

One of the most brilliant and showy of annuals, which has long been a general favorite. They come in flower early in the Summer and keep on blooming until hard frost; require little attention and succeed almost anywhere. For perfection of blossom start the seeds in March and prick out once or twice before transferring to the open border in May or June. Provide the plants with plenty of room, at least 18 inches apart each way, and they soon completely cover the ground.

**Culture.** Should not be sown in the open ground before latter part of May. The best plan is to start the seeds indoors in a shallow box or in a hotbed, in a temperature of about 65 degrees. Cover the seeds to a depth of four times their size and press the surface firm with a board. Water with a fine spray. Transplant the seedlings after the second leaves form and remove to the garden when the weather is warm and settled.

**Northrup, King & Co.'s**

**Double Giant ZINNIA.**



This is considered the best type for general use; forming bushy compact plants not over 3 feet high and bearing flowers measuring 5 to 6 inches across. In our special imported strains of Double Zinnias are found the most perfect and beautiful types which have yet been produced by the flower specialists of America. We are confident that they will please all who grow them.

They bear freely on long, strong stems numerous semi-globular, mostly very double flowers, all of the largest size, making them of great value in large beds, borders, etc; grown under favorable conditions they remain in bloom from early summer to autumn.

Pkt.

**3805. Double White** ..... 15c.

**3806. Double Orange** ..... 15c.

**3807. Double Salmon Rose** ..... 15c.

**3808. Double Dark Scarlet** ..... 15c.

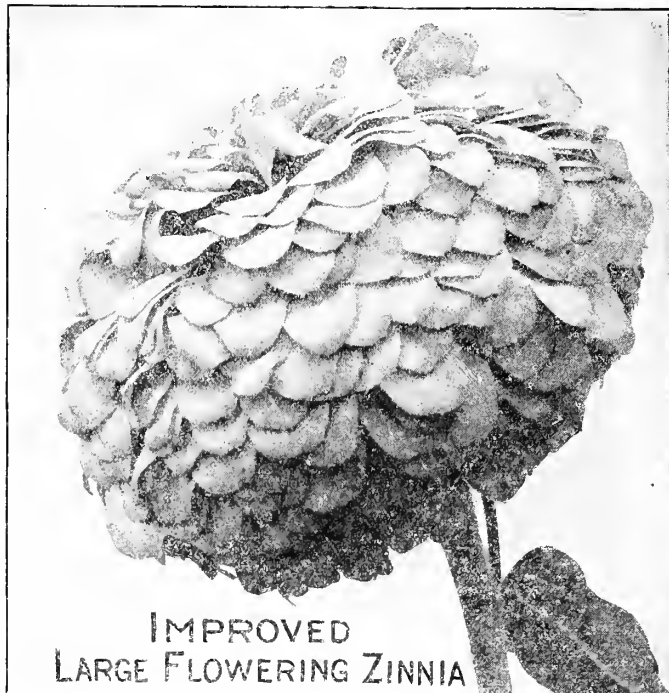
**3809. Double Canary** ..... 15c.

**3810. Bright Scarlet** ..... 15c.

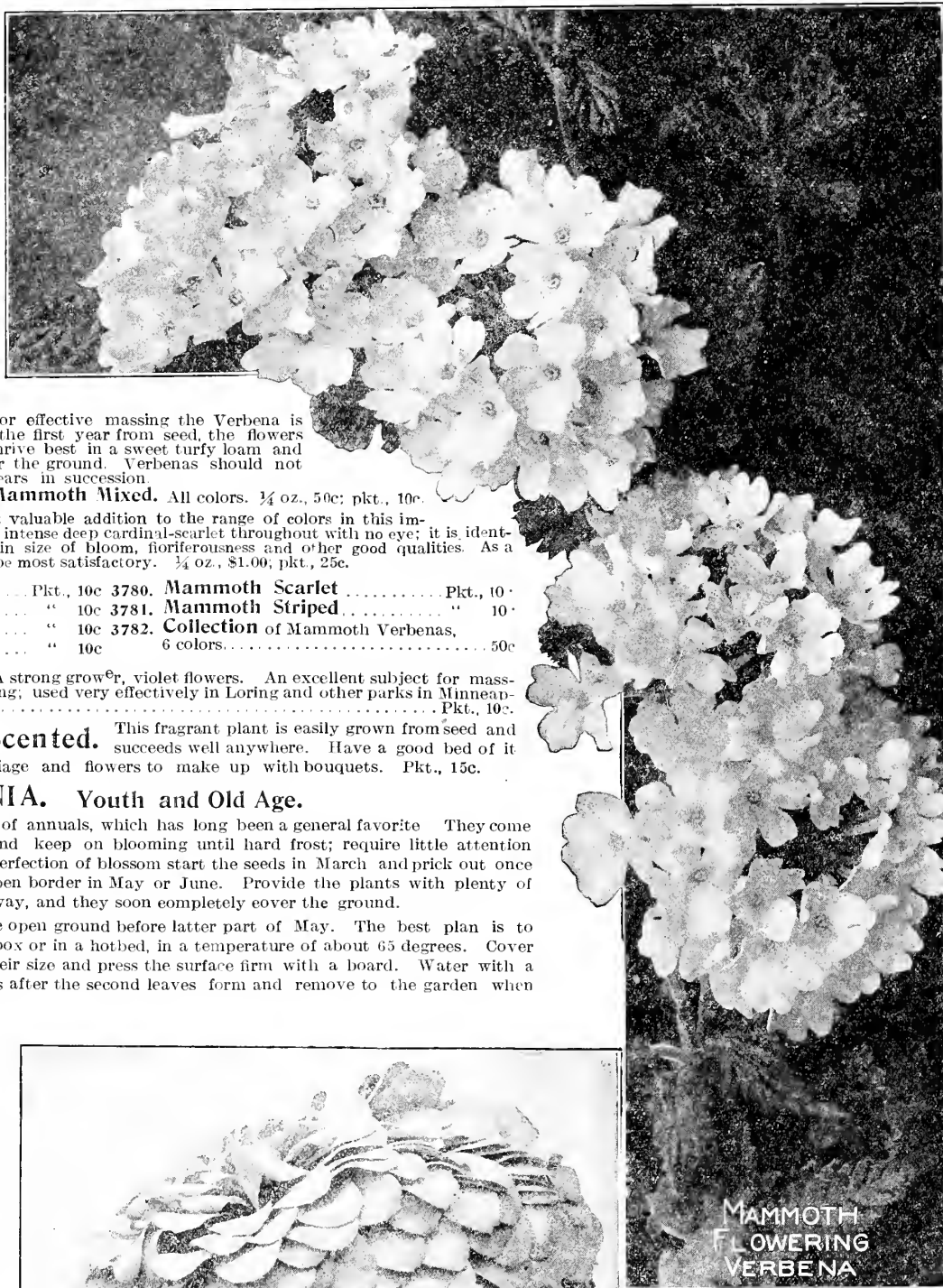
**3811. Collection.** 6 separate colors ..... 75c.

**3812. Giant Double Mixed,** all colors  $\frac{1}{4}$  oz., 50c; pkt., 15c.

**Zinnia.** In separate colors,  $\frac{1}{4}$  oz., 50c.



IMPROVED  
LARGE FLOWERING ZINNIA



## Various Zinnias

**3815 Mexicana Perfection Mixed**

**Colors.** A very dwarf variety, bearing small double flowers of unusual colorings; makes a beautiful border.  $\frac{1}{4}$  oz., 75c., pkt., 15c.

**3820 Mexicana Golden Star.**

A pretty single flower/ig variety, with rich golden orange star shaped flowers, 2 to 3 inches across, of compact growth, about 15 inches high, and makes an effective border.  $\frac{1}{4}$  oz.; 75c; pkt; 15c.

**3825 Red Riding Hood.** This little gem grows but a foot high; of compact form and covered the entire season with little button-like, intense scarlet, very double flowers not over an inch across; as a border it is highly effective.  $\frac{1}{4}$  oz; 50c; pkt; 10c.

**3830 Single Mixed.** For bedding these are very effective, and are by many considered more artistic than the double-flowering sorts.  $\frac{1}{4}$  oz; 35c; pkt, 5c.



## HARDY ANNUAL and PERENNIAL CLIMBERS

**3835. Adlumia.** *Cirrhusa. Mountain Fringe, Allegheny Vine or Climbing Fumitory.* A graceful hardy biennial climber, but as it resows itself year after year, it may be considered perennial. The feathery foliage closely resembles that of the Maiden-hair Fern. The flowers are tube-shaped, flesh-colored resembling the Bleeding Heart, and completely cover the plant. For covering trellises, stumps of trees, etc., it is very desirable. Flowers the first year from seed.  $\frac{1}{4}$  oz., 65c. pkt., 10c.

**3840. Balloon Vine.** (*Love-in-a-Puff*). A rapid-growing annual climber; succeeds best in light soil and warm situation; flowers white; seed vessels look like miniature balloons and of great interest to children. Oz., 25c. pkt., 5c.

**3845. Bean. Scarlet Runner.** A great favorite bean as an ornamental climber, and for the delicious edible beans which succeed the sprays of bright scarlet pea-shaped blossoms from July to September. Lb., 35c. pkt., 10c.

**3850. Canary-Bird Vine.** (*Tropaeolum Canariense*) A beautiful rapid annual climber, the charming canary-colored blossoms bearing a fancied resemblance to a bird with its wings half expanded. Oz., 35c. pkt., 10c.

### Cobaea. Cup and Saucer Vine or Cathedral Bells.

One of the handsomest and most rapid growing of the annual climbers. Climbs thirty feet in a season. The flowers are bell-shaped. Very prolific and perfectly hardy. The vines are always clean and free from insects. Valuable for covering trellises, arbors, trunks of trees, etc.; will cling to any rough surface. In sowing, place seeds edgewise and merely cover with light soil; to get early results start the seed indoors in March or April; can also be sown in the open ground in May.

**3855. Scandens.** Large, bell-shaped purple flowers.  $\frac{1}{4}$  Oz., 25c. pkt., 10c.

**3860. Scandens Alba.** Pure white.  $\frac{1}{4}$  oz., 50c. pkt., 15c.

### Climbing Morning Glories or Convolvulus Major.

One of the most free-flowering and rapid-growing plants in cultivation, thriving in almost any situation; the beauty and delicacy of their brilliant flowers are unsurpassed. Soaking the seeds in warm water for an hour or two hastens germination; annuals 15 feet.

**3865. Mixed.** All colors. Oz., 25c. pkt., 5c.

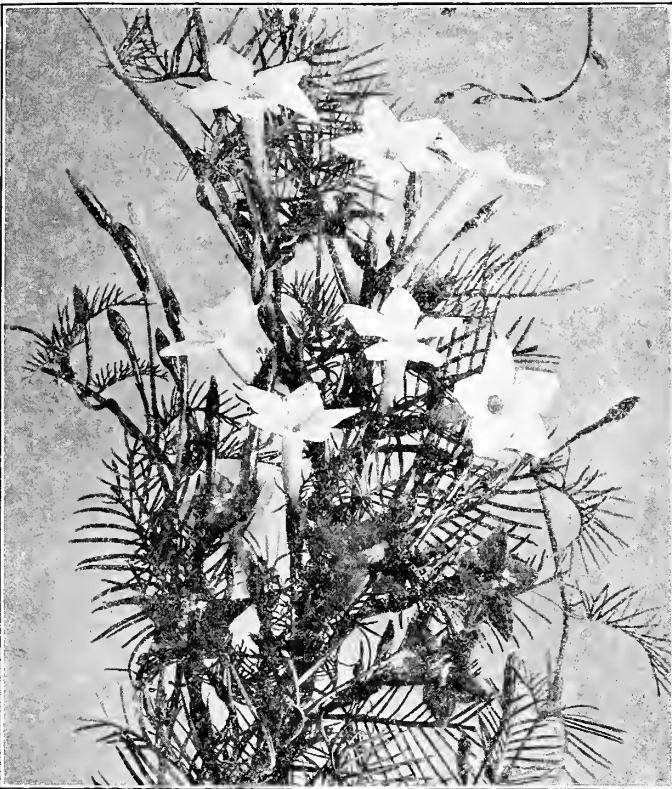
**3870. Double Flowering.** About 80 per cent of the seedlings will produce double flowers, the remainder semi-double or single.  $\frac{1}{4}$  oz., 20c. pkt., 10c.

**Cypress Vine. Ipomoea Quamoclit.** One of the most popular vines, with very delicate fern-like foliage, and masses of beautiful, small, star-shaped flowers. Sow in May, first soaking the seeds in warm water for a few hours; 15 feet.

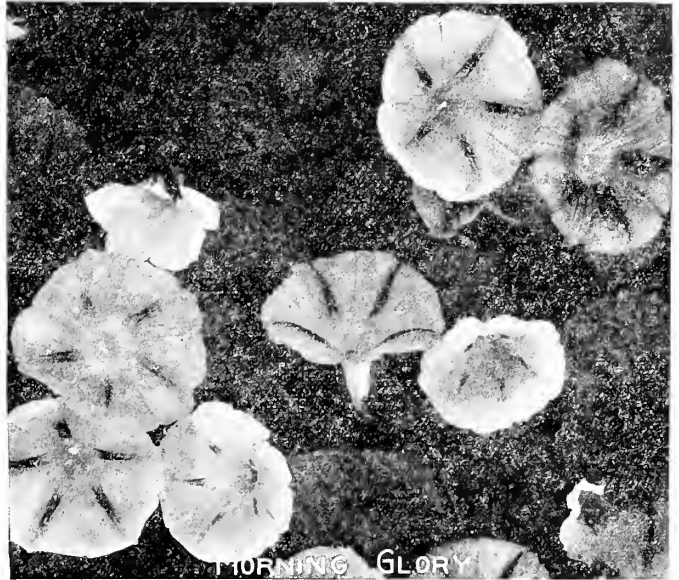
**3875. Mixed.** White and scarlet.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

**3880. Scarlet.**  $\frac{1}{4}$  oz., 35c. pkt., 10c.

**3885. White.**  $\frac{1}{4}$  oz., 35c. pkt., 10c.



Cypress Vine



**Dolichos. Hyacinth Bean.** A rapid growing and free-flowering annual climber. The seed pods which follow the flower are very ornamental for covering arbors, trellises, etc. After danger of frost is over, sow the seeds where they are to remain. The soil should be well pulverized and the seed covered to a depth of about 4 times their size. Press down firmly with a board, and thin out so that the plants will not become crowded. For early flowering they should be sown in-doors in a shallow box, and transferred to the open ground when the weather becomes suitable. Sow the seed in the garden in May where they are to remain; 10 feet.

**3890. Daylight.** This grand Hyacinth Bean comes from Japan. Seed sown late in May by the middle of July attains a height of 10 feet; spikes of snow-white pea-shaped blossoms until late fall. The heart-shaped foliage is bright green and not affected by insect pests. Oz., 25c. pkt., 10c.

**3895. Darkness.** Identical in every way to the above except in color, which is rich purple-violet. Oz., 25c. pkt., 10c.

**3900. Lablab, Mixed.** Purple and white. Oz., 25c. pkt., 10c.

**4000. Echinocystis. Wild Cucumber Vine.** A well known vine, common in many sections, and the quickest climber known for covering verandas, old trees and houses, trellises, etc., never suffering from the heat but retaining its fresh and lively green color; never infested with insects, and very profuse in sprays of white flowers in July and August. It will sow itself and come up in the same place. Sow seed in Fall. Oz., 25c. pkt., 5c.

### Humulus. Japanese Hop.

**4005. Humulus. Japonicus. (Japanese Hop)** A very ornamental and fastgrowing climbing plant. The foliage resembles in shape that of the common Hop, is very dense, and in color a lively green; annual.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

**4010. Humulus. Japonicus Variegatus.** A variegated variety of the above. The leaves are beautifully marbled and splashed with silvery-white, light and dark green; very effective for screens, arbors, trellises, etc. As with the green-leaved variety, it is never injured by insects nor affected by the heat, but retains its bright variegated foliage until frost.  $\frac{1}{4}$  oz., 50c. pkt., 15c.

### IPOMOEA

Climbers of rapid growth, with beautiful and varied flowers; for covering walls, trellises, arbors, or stumps of trees they are invaluable; it is well to soak the seed in warm water over night to assist in rapid germination.

**4015. Grandiflora.** (Moon Flower). At night and during dull days the plants and covered with an abundance of large, pure white, fragrant flowers, 5 to 6 inches in diameter. It grows very rapidly and will cover a large surface. Oz., 75c; pkt., 15c.

**4020. Rubra Coerulea (Heavenly Blue).** Immense flowers of bright sky-blue, very beautiful.  $\frac{1}{4}$  oz., 35c; pkt., 10c.

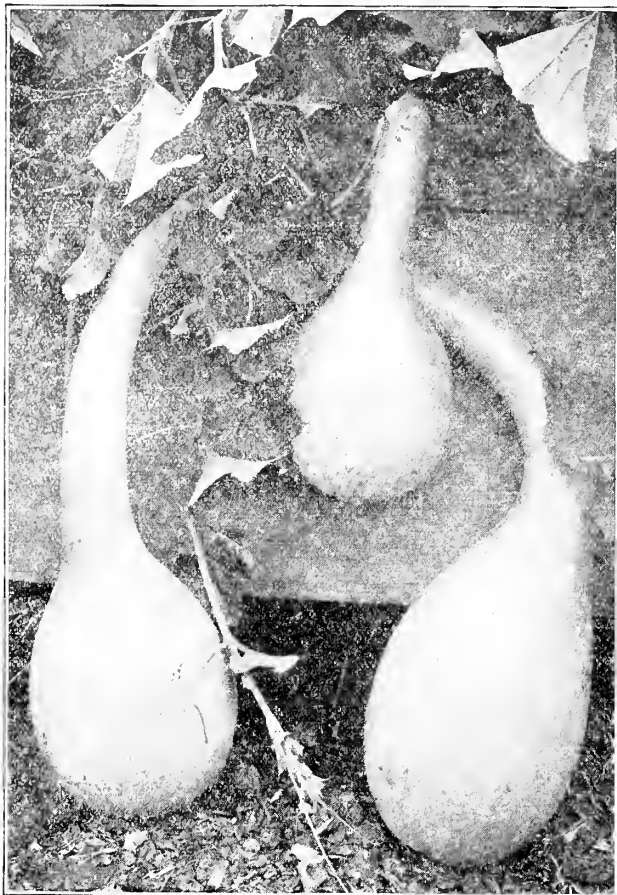
**4025. Setosa.** (Brazilian Morning Glory). Flowers, pleasing rose color borne very freely in large clusters. As a quick-growing vine it has no equal, covering an enormous space in a short time. Oz., 35c; pkt., 10c.

### EMPEROR MORNING GLORIES or IMPERIAL JAPANESE.

The handsomest of all Morning Glories. Of the easiest culture, can be sown in the open ground in a sunny situation when the weather has become warm and settled; they soon cover a large area, and even before flowering are decidedly interesting on account of the varied forms of the foliage and their markings. The flowers are of gigantic size and their colorings beyond description; the self or solid colors range from snow-white to black-purple, with all the possible intermediate shades; there is also an endless number having flowers spotted, marbled, striped, flaked splashed etc.

**4030. Mixed Imperial Japanese.** Saved from a grand collection, which we are sure will produce pleasing results. Oz., 35c. pkt., 10c.

## HARDY ANNUAL and PERENNIAL CLIMBERS



### ORNAMENTAL GOURDS

Desirable where an immense amount of vine is wanted quickly. Fine for a screen. Fruit is unique, ornamental and often useful. It will keep for years when properly ripened. Plant after ground has become warm, in rich soil.

- 4035. Mixed Varieties. All kinds Oz., 35c; pkt., 5c.
- 4040. Apple-shaped. Oz., 35c; pkt., 5c.
- 4045. Dipper, or Calabash. Oz., 35c; pkt., 10c.
- 4050. Egg-shaped. Fruit white like an egg. Oz., 35c; pkt., 5c.
- 4055. Hercules' Club. Club-shaped; 4 feet long Oz., 35c; pkt., 5c.
- 4060. Orange-shaped. (Mock Orange) Oz., 35c; pkt., 5c.
- 4065. Pear-shaped. Striped; very showy. Oz., 35c; pkt., 5c.
- 4070. Sugar Trough. Oz., 35c; pkt., 5c.
- 4075. Luffa. (Dish-rag, Sponge or Bonnet Gourd) Oz., 35c; pkt., 5c.

#### 4080. The Cardinal Climber. (Ipomoea Quamoclit Hybrida)

Now generally considered the most beautiful and brilliant annual climber ever sent out. It is a strong and rapid grower, attaining a height of 30 feet or more, with beautiful fern-like foliage, and literally covered with a blaze of circular cardinal-red flowers from mid-summer till frost. The flowers, about 1½ inches in diameter, are borne in clusters of 5 to 7 each, and wherever it has been grown has attracted more attention and favorable comment than any other plant in the garden. Like other Ipomoeas, it delights in a warm, sunny situation and good soil. The seed may be started indoors in March or April in a temperature of not less than 70 degrees, and the plants set out when the weather gets warm, but it is just as well to wait until the weather gets warm and settled and then sow out of doors. In either case germination will be hastened and made more certain by filing or cutting a small notch in each seed. They are likely to germinate poorly unless this precaution is taken. If sown in cold, wet ground, the seed is liable to rot. ¼ oz., \$1.00; pkt., 15c.

**Lathyrus.** (Everlasting, or Hardy Sweet Pea.) Showy, free-flowering hardy perennial climbers for covering old stumps, fences, etc., continually in bloom; fine for cutting.

- 4085. Latifolius "White Pearl" Finest white variety. ¼ Oz., \$1.00; pkt., 25c.
- 4090. Pink Beauty. Rose pink. ¼ oz., 35c; pkt., 15c.
- 4095. Red. ¼ oz., 35c; pkt., 15c.
- 4100. Mixed. All colors. Oz., 35c; pkt., 15c.

4105. **Linaria.** Cymbalaria. (Kenilworth Ivy, or Mother of Thousands) Lavender and purple. A charming, neat, hardy perennial trailing plant, suitable for baskets, vases, pots and rock work. Oz., 75c; pkt., 15c.

4110. **Maurandia.** Barclayana. Beautiful, rapid, slender-growing climbers, blooming profusely until late in the autumn, also fine for the conservatory or greenhouse; if desired for the house, take up before the approach of frost. A half-hardy perennial, flowering the first season if sown early; 10 feet; mixed colors, including purple, blue, white and rose. ¼ oz., \$1.00; pkt., 15c.

4115. **Mina.** Sanguinea. A beautiful and rapid-growing climber, producing innumerable brilliant blood-red flowers. Oz., 50c; pkt., 10c.

**Nasturtium.** Trailing or Climbing. See Page 52.

**Mormordica.** Very curious climbing vine, with ornamental foliage, fruit golden-yellow, warted, and when ripe opens, showing the seed and its brilliant carmine interior; fine for trellises, rock-work, stumps, etc.; annuals 10 feet.

4120. **Balsamina.** (Balsam Apple). Round apple-shaped fruit with very fine glossy green foliage. The prettiest climber of the two. ¼ oz., 35c. pkt., 10c.

4125. **Charantia.** (Balsam Pear). Pear shaped fruit; foliage heavier than the above; the fruits of this variety are used medicinally. ¼ oz., 35c. pkt., 10c.

4130. **Pueraria.** Thunbergiana. (Japanese Kudzu Vine)

The fastest growing hardy climbing plant. It will grow 8 to 10 feet the first year from seed, and after it has become established there seems to be no limit to its growth, 50 feet in a single season being not unusual. Its foliage is large and covers well; it bears small racemes of rosy-purple; pea-shaped blossoms towards the close of August. A splendid subject for covering permanently verandas, dead trees, etc. Oz., \$1.00; pkt., 15c.

4135. **Thunbergia.** (Black-eyed Susan) Beautiful, rapid growing annual climbers, preferring a warm sunny situation; used extensively in hanging-baskets, vases, low fences, etc., very pretty flowers in buff, white, orange, etc., with dark eyes, mixed colors; 4 feet. ¼ oz., 50c; pkt., 10c.

### Climbing Plants

Require liberal applications of plant food in the form of Fertilizer to produce satisfactory results, otherwise they make poor stunted growth and rarely blossom satisfactorily. Use Northrup, King & Co's., Sterling Garden and Lawn Fertilizer, Bone Meal and Sheep Manure.

Many kinds of Trees, Shrubs and Bulbs are benefited by the proper use of Fertilizer, especially on light poor soils where flowering shrubs and vines are planted. We shall always be pleased to advise you when you call at our Retail Department in Minneapolis located at Hennepin Avenue at First Street.

**We carry all the Standard Fertilizers for the  
Lawn and Garden.**



**Ipomoea, Imperial Japanese.**

## STRAW FLOWERS or EVERLASTINGS

Straw Flower or Everlastings are now coming into favor. They are not only ornamental in the garden when growing but are greatly admired and prized for the winter decoration of vases and for making durable bouquets.

Flowers which are ready for drying should be cut when partially unfolded and suspended with their heads down in a cool place until thoroughly crisp dry.

**Acroclinium.** A pretty annual "Everlasting," growing about 15 inches high, bearing white or rosy-pink flowers, which, when cut in the bud state can be dried and used in winter bouquets. A nice thing to grow in a mixed border aside from its use as an everlasting.

4140. Double Mixed.  $\frac{1}{4}$  oz., 25c. pkt., 10c.

4145. Single Mixed.  $\frac{1}{4}$  oz., 25c. pkt., 5c.

**Gomphrena** GLOBE AMARANTH. These well-known, hardy annuals are among the most popular of the Everlastings for dried winter bouquets; also well adapted for beds and edgings in the garden. Popularly known as "Bachelor's Button," the flowers resemble clover heads and can be dried and used in winter bouquets. Cornflowers and a number of other flowers are also known as Bachelor's Buttons, and in ordering it is well to order by number to prevent mistakes.

4148. Mixed. 2 feet.  $\frac{1}{4}$  oz., 25c. pkt., 5c.

**Helichrysum.** (Straw Flower) Eternal Flowers. *Monstrosum* Fl. PL. A most popular, hardy annual; the flowers are large and the color bright; highly prized for winter bouquets. Flowers intended for drying should be gathered when partially unfolded and suspended with heads downward in cool and airy place. 1 to 2 ft. Succeeds in any good garden soil; give them plenty of room to develop, planting not closer than 12 inches apart; hardy annuals.

4150. Mixed. All colors.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

4155. Crimson. Very rich.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

4160. Fireball. Bright red.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

4165. Goldenball. Golden yellow.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

4170. Rose Carmine. Rich and glossy.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

4175. Silver Ball. Glistening white.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

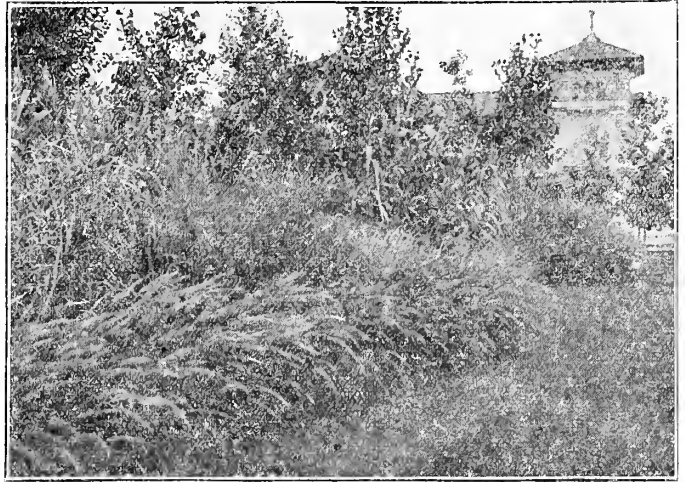
4180. Violet. Very rich color.  $\frac{1}{4}$  oz., 35c. pkt., 10c.

**Statice. Sea Lavender.** See Page 68.

4185. **Xeranthemum.** *Annuum.* (Everlasting, or Immortelle) One of the prettiest and most satisfactory of the Everlastings, bearing an abundance of bright rose, purple and white flowers, which are not only showy in the garden but very useful as dried flowers in winter bouquets. Seed can be sown in the open ground early in May, growing readily in any open, sunny position. This well-known, hardy annual is one of the oldest and prettiest of the Everlasting flowers, and in winter bouquets retain their color and form for years. Fine for beds and borders; in bloom all the season until frost.  $1\frac{1}{2}$  to 2 ft. Mixed colors. Pkt., 10c.



Helichrysum—Straw Flower



Various Varieties of Ornamental Grasses.

## ORNAMENTAL GRASSES

The Ornamental Grasses are very attractive to use in mixed flower-beds or borders, and for grouping by themselves give fine effects. Many of them, if cut before they are entirely ripe, will be found very useful, when dried, in the formation of winter bouquets, in connection with "Everlastings."

Seeds of the Ornamental Grasses may be sown in shallow boxes in February or March and transplanted to the open ground in May or early June. Can also be sown in the open ground late in May or early June.

**Agrostis.** *Cloud Grass.* Hardy Annual. Very fine for vases and bouquets.

4190. *A. Nebulosa.* Very delicate and graceful. 18 in. pkt., 10c.

4195. **Arundo** *Donax.* (Great Reed). Hardy Perennial. Well adapted for large clumps; stately and ornamental. 10 ft. pkt., 10c.

4200. *A. Foliis Variegatis.* Green leaves, striped with white. pkt., 10c.

4205. **Avena** *Sterilis.* (Animated Oats). Hardy Annual. Drooping, curious and very graceful. 2 ft. pkt., 10c.

4210. **Briza** *Maxima.* (Quaking Grass). Hardy Annual. Well-known graceful species; fine for bouquets. 1 to  $1\frac{1}{2}$  ft. pkt., 10c.

4212. **Bromus** *Brizaeformis.* Hardy annual. Fine variety for large winter bouquets. 2 to  $2\frac{1}{2}$  ft. pkt. 10c.

4215. **Coix Lachrymae.** *Job's Tears.* An ornamental grass with broad leaves and shiny, pearl-like seeds, used for beads. Plant early in the Spring, four or five seeds in a hill, one-half inch deep. Lb. \$1.50; oz., 15c; pkt., 10c.

**Eragrostis.** Hardy Annual. Pretty Grasses growing a foot or more high, and characterized by their beautiful dancing spikelets; all are handsome for bouquets.

4220. *E. Elegans* (Love Grass). 1 ft. pkt., 10c.

4225. **Erianthus** *Ravennae.* (Plume Grass). Hardy Perennial. Very stately and ornamental, fine, silvery plumes, splendid in lawn groups. Resembles closely the Pampas Grass. 6 to 8 ft. pkt., 10c.

**Eulalia.** Hardy Perennial. Among the most beautiful of the tall-growing Grasses. 4 to 6 ft.

4230. *E. Japonica.* Long, dark green leaves, fine for groups. pkt., 10c.

4235. *Eulalia japonica zerbina.* (Zebra Grass). The dark green leaves are barred with creamy white; variegations run across foliage. pkt., 10c.

**Gynerium.** (Pampas Grass). Hardy Perennial. Noblest of the tall-growing ornamental Grasses. Bears magnificent plumes; needs protection in winter. 4 to 6 ft.

4240. *G. Argenteum.* Long, silvery white plumes; splendid. pkt., 10c.

4245. *G. Argenteum roseum.* Rose-colored plumes. pkt., 10c.

**JOB'S TEARS.** See *Coix Lachrymae.*

**Pennisetum.** Hardy Annual. Very ornamental; fine for groups and bouquets.

4250. *P. Longistylum* (*villosum*). Graceful, greenish white plumes; good in beds. 2 ft. pkt., 10c.

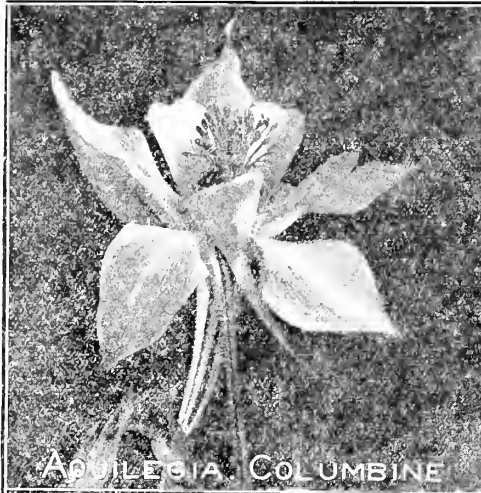
4255. *P. Ruppelianum.* Violet-purple plumes; fine for edging beds of tall plants like cannas. 2 to 3 ft. pkt., 10c.

**Stipa.** Hardy Perennial. Popular and graceful species; splendid for bouquets 2 ft.

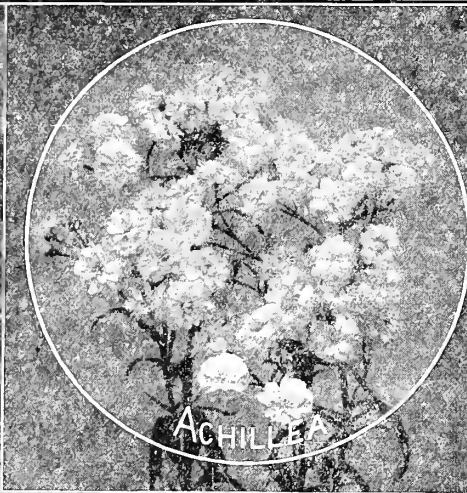
4260. *S. Pennata.* (Feather Grass). Delicate, silvery white feathery plumes; a favorite sort. pkt., 10c.

4265. **Zea.** *Japonica Variegata.* Striped, Improved Rainbow Corn. oz., 35c. pkt., 10c.

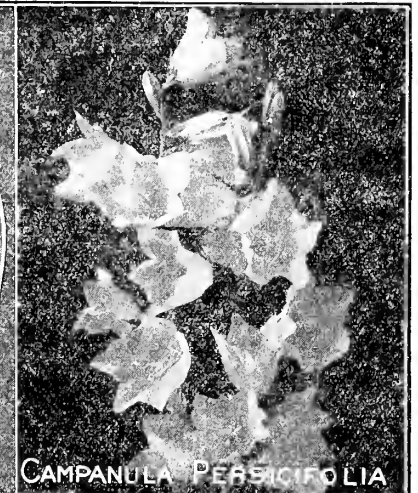




AQUILEGIA COLUMBINE



ACHILLEA



CAMPANULA PERSICIFOLIA

## HARDY PERENNIAL FLOWER SEEDS

**Culture.** Everyone likes perennials because they are permanent—once established they increase in size and beauty. Many sorts are raised from seed, usually blooming the year after sowing. The seed bed must be well drained, fine and firm. If the soil is at all heavy cover with one inch of sand. The seed may be planted from June 10th to early July. After soaking the seed 24 hours, sow the fine sorts in rows, 3 inches apart, on the surface of sand or well sifted soil, and press down with a board. Large seeds may be covered to twice their thickness. The bed must be kept shaded constantly with a screen made as follows: nail common laths 2 inches apart on end strips. Place this screen over the bed on 4 bricks set endwise. Water as required; when seedlings have two pairs of leaves, transplant into rows a few inches apart each way, and later when they begin to crowd transplant a second time. This involves extra work but is necessary to raise sturdy plants. Keep them shaded with the screens all Summer. In September, if well developed, they may be placed in their permanent locations where they are to blossom the following year, or left in the seed beds for early Spring transplanting. After the ground freezes hard, cover with evergreen or other branches and a few inches of straw or leaves loosely piled on top. In late March, remove one-half the top mulch and loosen up the rest, to admit air. Take off the remainder gradually, as the season advances.

**5000. Achillea. Double White Yarrow.** One of the best hardy white perennials. Grows about two feet high and from Spring until frost is covered with heads of purest white, double flowers. Pkt., 15c.

**5005. Agrostemma. Rose of Heaven.** An attractive free-blooming, hardy perennial, of easy culture, producing bright colored flowers on long, slender stems. Blooms first season, fine for cutting, 2 ft. Pkt., 15c.

**5010. Alyssum Saxatile Compactum.** Has handsome masses of bright yellow flowers. Fine for borders. Pkt., 15c.

**5015. Anchusa, Italian Dropmore Variety.** Blue, large, forget-me-not-like flowers. Very fine for the back of the perennial border or for a screen. Five feet high. Pkt., 15c.

**Anemone. Windflower.** A very pleasing, hardy perennial, producing large flowers; few plants compare with them in beauty; fine for bouquets. Especially good for rock work and sheltered banks. They need extra good Winter protection.

**5020. Coronaria, Mixed Colors. Poppy Anemone.** Pkt., 15c.

**5025. St. Brigid.** A beautiful selection of the above, comprising semi-double and double flowers in a wonderful array of colors. Pkt., 15c.

**5030. Anthemis tinctoria. Hardy Marguerite.** A native of England; grows about a foot high, bearing in profusion, daisy-shaped, yellow flowers which come in July and August. Pkt., 15c.

**Aquilegia. Columbine.** Charming hardy perennial plants growing from one to three feet high, bearing in countless numbers through May and June their exquisite blossoms of clear blue, white, rose, yellow, purple, striped, etc. For planting in permanent borders or naturalizing along the edges of woods or shrubbery they are unsurpassed.

Seed may be sown in the open ground early in the spring, and will, in most cases bloom the same season; or they may be planted in August or September, and will come up early and make vigorous plants, which will bloom abundantly during late spring and early summer.

Columbines should be planted wherever their presence will serve to lighten up a too stiff and formal planting, for no other plant has so airy a grace as the Columbine, is more generous of its blooms, or more effectively adapted for cut flowers.

**5035. Northrup, King & Co.'s Single Long Spurred Hybrids.** All colors mixed. Pkt., 15c.

**5040. Northrup, King & Co.'s Double.** All colors mixed. Pkt., 15c.

**5045. Californica hybrida.** Exquisite flowers, in yellow and orange shades, all with long spurs. Pkt., 15c.

**5050. Coerulea.** Blue flowers from the Rocky Mountains. Pkt., 15c.

**5055. Chrysanthra. Golden Spurred Columbine.** Vigorous and bushy in habit. 2½ ft. Pkt., 15c.

**5060. Canadensis.** This is the scarlet and yellow native species and one of the brightest. Pkt., 15c.

**5065. Coerulea hybrida.** Beautiful hybrids, bearing large flowers in a great variety of colors. Pkt., 15c.

**5070. Arabis alpina.** A low, early blooming perennial with white, fragrant flowers. For rock work, borders or covering steep banks. Pkt., 15c.

**5075. Armeria Formosa. Sea Pink. Thrift.** Flowers in close, round heads; color light pink or white. They are shaped like white clover heads, fine for bouquets. Pkt., 15c.

**Bellis. English Daisy.** Daisies are easily raised from Spring sown seed, and come into flower in a very short time. They thrive best in cool, shady places, but do well in almost any soil. They are very pretty when in bloom and deserve to be grown more universally than they are. Admirably adapted for edgings, borders, and low beds 6 to 8 ins.

**5080. Longfellow.** Beautiful deep pink, double. Pkt., 15c.

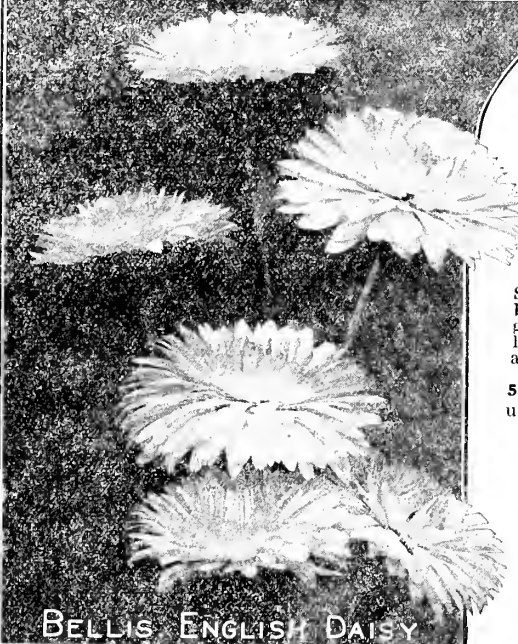
**5085. Snowball.** Best pure white Daisy, on long stem. Pkt., 15c.

**5090. Double Mixed.** Embracing all colors. Pkt., 15c.

**Boltonia. False Chamomile.** One of the showiest of our native hardy perennials, growing 4 to 6 feet high, with daisy-like flowers in countless thousands from July to September.

**5095. Asteroides.** White. Pkt., 15c.

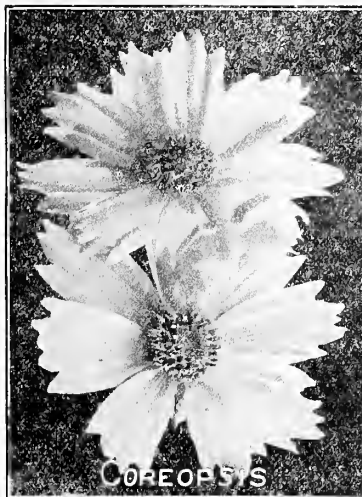
**5100. Latisquama.** Lilac pink. Pkt., 15c.



BELLIS ENGLISH DAISY



CANTERBURY BELLS



COREOPSIS



SHASTA DAISY

GYPSOPHILA  
BABY'S BREATHDIGITALIS  
FOXGLOVE

**Campanula. Bellflower.** Beautiful, hardy, herbaceous perennials, bearing a great profusion of attractive bellflowers; thrive best in light soil. They will continue to bloom for weeks if given a partially shaded location.

5105. *C. carpatica*. Very charming plant six to eight inches high, deep blue flowers. Pkt., 15c.  
 5110. *C. persicifolia*. Flowers blue, shading to white. Pkt., 15c.  
 5115. *C. pyramidalis*. Blue. Steeple Bells. Chimney Bellflower. 4 or 5 ft. Pkt., 15c.  
 5120. *C. pyramidalis*. White. Chimney Bellflower. Pkt., 15c.

**Canterbury Bells. Campanula calycanthema.** Cup and Saucer. Produces beautiful single flowers three inches in length with saucers three to four inches in diameter. The plants form pyramids of bloom bearing from 100 to 200 of these exquisite blossoms for weeks during the early Summer. A hardy biennial 2½ feet high, flowering the second season from seed. See illustration, page 64.

5125. Rose—Delicate rosy-pink. Pkt., 15c. 5135. White—Pure white. Pkt., 15c.  
 5130. Blue—A fine, clear shade. Pkt., 15c. 5140. Mixed—All colors. ¼ oz., 75c; Pkt., 15c.

**Canterbury Bells. Campanula medium.** The old-fashioned variety which produces large, bell-shaped flowers. Popular and beautiful are Campanulas. Although the Canterbury Bells are biennials, they may also be treated as annuals, and will flower the first year from seed, if sown early in the spring. For effect in the border, plant them in clumps of separate colors, and they are beautiful when massed. The perennial varieties, treated as perennials, flower most profusely by mid-summer. The tall and stately growing kinds will be found of great value for the border, while the dwarf sorts make charming rock and edging plants. All the varieties like a rich, sandy soil with good drainage.

5145. Dark Blue. Pkt., 15c. 5155. Rose. Pkt., 15c. 5165. Single Mixed—All colors. Pkt., 15c.  
 5150. Light Blue. Pkt., 15c. 5160. White. Pkt., 15c. 5170. Double Mixed—All colors. Pkt., 15c.

**Carnation Hardy Border.** Carnations are general favorites for their delicious fragrance and richness of colors. They are indispensable, both for greenhouse culture in winter and for the garden in summer. The Marguerite and Chabaud type are the best for summer flowering.

5175. Double Mixed. A good hardy strain for outdoor culture, flowering the second season and producing a mass of flowers in a great variety of colors. ¼ oz., 50c; Pkt., 15c.

**Chrysanthemum.** 5180. *C. Maximum*. Ox Eye Daisy. Flowers like the wild white Daisy, but twice as large. Handsome when in flower and the flowers have good stems for cutting. Hardy and easily grown in full sun. Pkt., 15c.

5185. Shasta Daisies. Alaska. An excellent hardy perennial variety. Flowers 4 to 5 inches across, of the purest glistening white, with broad overlapping petals, and borne on strong stems; a beautiful cut flower, remaining in good condition a week or more. ¼ oz., 75c; Pkt., 25c.

5190. *Coreopsis*. *C. Lanceolata Grandiflora*. A hardy perennial about 2 feet high. This produces an abundance of large, daisy-shaped flowers on long stems. One of the best of all perennials for cut flowers. See illustration. Pkt., 15c.

**Delphinium. Hardy Larkspur.** Very decorative border plants ranging from 5 to 6 feet tall, whose side shoots flower after the main spike has finished, thus prolonging the blooming period. If the flower spikes are removed as soon as they fade, new ones will continue to appear at intervals all Summer. The colors run from pure white to darkest blue. Some varieties have a black center, others show a pleasing contrast, in shades of blue, between the inner and outer petals. Stake all varieties when 18 inches high to prevent them being blown down. For cultural directions see top of page 64.

5195. *Belladonna*. Ever-blooming Hardy Larkspur. This is the freest and most continuous blooming Hardy Larkspur. The clear turquoise blue of its flowers is not equalled for delicacy and beauty. A really exquisite variety. Pkt., 25c.

5200. *Chinense*. (Blue Butterfly). A distinct and neat variety growing about 18 inches high, with fine feathery foliage, and producing freely spikes of large blossoms of intense gentian-blue. Pkt., 15c.

5205. *Album*. The white flowered form. Pkt., 15c.

5210. *Caucasicum*. Tall with handsome blue flowers. Pkt., 15c.

5215. *Formosum*. Flowers sky blue, shaded with indigo, 18 to 36 inches. Pkt., 15c.

5220. *Gold Medal Hybrids*. Mixed. Unquestionably the finest strain of mixed hybrids ever offered. This is the originator's strain consisting of the best-named varieties. The plants are of strong, vigorous habit, with large flowers in massive spikes, the majority running in the lighter shades of blue. Pkt., 15c.

5225. *Double Hybrids*. Finest double flowering mixed in great variety of charming colors. Pkt., 15c.

**Dianthus. Hardy Garden Pinks.** These varieties are well adapted for beds and borders; delightful, refreshing, spicy odor. Popularly known as "Sweet May Pinks" of the old time gardens, and still considered among the most beautiful for massing and cutting.

5230. *Plumarius*. (Grass Pink, or Pheasant-eye Pink.) Single, with fringed edged flowers of various colors. ¼ oz., 50c; Pkt., 15c.

5235. *Plumarius* Fl. Pl. (Double Hardy Garden Pinks.) Double and semi-double varieties in beautiful colors. ¼ oz., 75c; Pkt., 15c.

5240. *Plumarius Sempiternus*. (Ever-blooming Hardy Garden Pink.) Very beautiful, sweet-scented, double, semi-double and single flowers in great diversity of color. ¼ oz., 50c; Pkt., 15c.

Dianthus (Continued.)

5245. *Dianthus Latifolius Atrococcineus* Fl. Pl. (Everblooming Hybrid Sweet William.) A cross between an annual *Dianthus* and Sweet William, combining the free and continuous blooming qualities of the former with the hardness of the latter; in color an intense velvety crimson scarlet. ¼ oz., 50c; Pkt., 15c.

**Digitalis. Foxglove.** A very interesting family of old fashioned plants, whose culture is so simple as to bring them within the reach of all.

5250. *D. purpurea*, var. *gloxinioides*. This has a very great variety of colors, but as it is difficult to keep them true when growing separately, we offer it only in a mixture. Everyone should plant this strain. It grows in strong clumps and is one of our very finest hardy perennials. Pkt., 15c.

5255. *Eryngium*. Sea Holly. Has heads of handsome amethyst-blue flowers. Pkt., 15c.

**Gaillardia. Blanket Flower.** A very free blossoming perennial bearing large yellow or red daisy-shaped flowers all through the Summer. Easy to grow. Fine for cutting; 2 feet.

5260. *Kermesina Splendens*. Centre rich crimson, narrow canary-yellow border. Pkt., 15c.

5265. *Grandiflora Compacta*. Bushy plant 12 to 15 inches high, bearing long-stemmed richly colored flowers well above the foliage. Pkt., 15c.

5270. *Grandiflora Copper-red*. A striking new color. Pkt., 25c.

5275. *Grandiflora Superb* Mixed. Combinations of crimson and gold. ¼ oz., 35c; Pkt., 15c.

**Geum.** Flowers are large butter-cup shaped, borne in profusion; lasting well when cut, they are fine for bouquets.

5280. *G. Double Scarlet*. Large flowers, fine color. 2 feet. Pkt., 15c.

5285. *G. Single Orange Scarlet*. Pkt., 15c.

5287. *Golden Rod*. *Solidago Canadensis*. The well known, golden yellow favorite. Pkt., 15c.

Ask for prices on Hardy Perennial Flower Seeds in bulk.

## HOLLYHOCKS.

There is a revival of the old-fashioned flowers and Hollyhocks are among the best of the old garden favorites. Always a stately and majestic plant, the improvements in them have been so great that one would scarcely recognize in the old single Hollyhock, the parent of the magnificent and truly gorgeous flower of today.

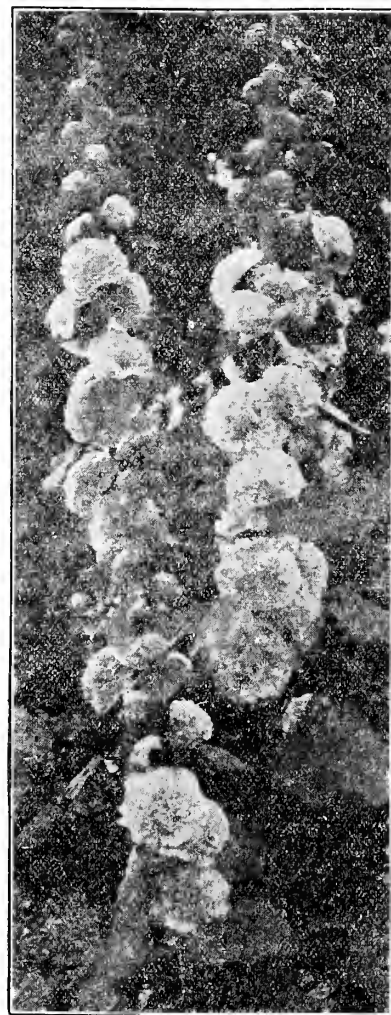
The most marked improvement is found in the Chater's and Allegheny strains. These are beautiful beyond description.

The Chater's produce for the most part, flowers which are densely double, although occasionally some single blossoms are seen among them. The colors are innumerable, ranging from pure white to darkest maroon, some are bright and gay, others of the softest and most delicate shades and tints. The stalks average about four feet in height but many are 6 and even 8 ft. high. These stalks are densely covered with blossoms as beautiful in texture and appearance as the Rose.

The Allegheny is of quite recent introduction. It grows very tall, and the flowers, though single, are of wonderful beauty and in great variety of color. The Chater's are beautiful beyond description, but the Allegheny is thought by many to be even still more beautiful than the Chater's. Hollyhocks form a capital background for a border of hardy perennials of lower growth, and are also very effective when planted in groups. Once established, as they easily are from seed, they reappear in their place each year. Hollyhocks thrive best in a rich, deep, well drained soil. As usually treated, the Hollyhock is a biennial, but if planted where the water will not settle around the crown in the Winter they become very satisfactory perennials. Follow cultural directions under heading "Hardy Perennial Flower Seeds."

### 5290. Single Hollyhocks.

Many prefer the single-flowering Hollyhocks. They are usually of freer growth than the doubles and present a very handsome appearance. Mixed, pkt. 15c.



Double Hollyhocks.

### 5295. Allegheny Hollyhocks.

The flowers are of mammoth size and have none of the formality of the ordinary type. This variety is a perpetual bloomer and has from 2 to 4 buds at the base of each leaf. The buds develop into flowers in rotation, the largest buds first, then the smaller ones, until all have become a beautiful mass of bloom. The colors vary from the palest shrimp pink to deep red. Although the flowers are single they are very beautiful and must be seen to be appreciated. The plants are of strong growth, sending up spikes 6 to 7 feet high. Mixed colors, pkt., 15c.

### Chater's Double Hollyhocks.

5300. Double White... Pkt., 15c. 5315. Bright Red... Pkt., 15c. 5325. Yellow... Pkt., 15c.  
5305. Bright Pink... Pkt., 15c. 5320. Salmon Rose... Pkt., 15c. 5330. Maroon... Pkt., 15c.  
5310. Chater's Selected Strain. Extra Choice Double Mixed. Pkt., 15c.

5335. *Gypsophila paniculata*. Baby's Breath, Bridal Veil. The plants are small, starlike and borne in feathery sprays, which are highly esteemed for cut flowers as they lend a most graceful effect when combined in bouquets. This pleasing flower should be in every garden, for it is almost indispensable in the arrangement of flowers, either in vase or bouquet work. Pkt., 15c.

5340. *Gypsophila paniculata*, fl. pl. One of the most important hardy perennials of recent introduction. The plant grows from 3 to 3½ feet high, bearing its pretty little double white flowers in much-branched panicles which when cut, can be used to great advantage with other flowers or by themselves, as they retain their beauty for months. It is also a most desirable addition to the hardy border. Pkt., 25c.

5345. *Helenium autumnale*. A good sized bush covered in Autumn with single bright yellow flowers giving it much the appearance of the pompon *Chrysanthemum*. Very valuable for use among shrubbery, lasting in bloom a long while and at its best when most plants are through blossoming. Pkt., 15c.

5350. *Heliopsis*. 3 to 4 feet high beginning to flower early in the season, and continuing the entire summer. The flowers are beautiful deep golden-yellow color about 2 inches in diameter; of very thick texture and very graceful for cutting. Pkt., 15c.

5355. *Scabra Zinniaeflora*. A new double flowering form bearing golden-yellow Zinnia-like flowers. In addition to being a very showy plant in the hardy border, it is one of the best perennial plants for cutting. Pkt., 15c.

5360. *Hesperis Matronalis*. Sweet Rocket. Old-fashioned garden plant, and among the most desirable of hardy flowers; also known as Dame's Rocket and Dame's Violet; grows from 2 to 3 feet high, and bears spikes of showy white, lilac and purple fragrant flowers. Excellent for naturalizing among shrubbery or for planting in a permanent border; mixed colors. Pkt., 15c.

5365. *Hibiscus*. New Giant Flowering Marshmallow. Wonderfully improved form of our greatly admired native Marshmallow, in which flowers of great size—frequently ten to twelve inches in diameter—have been developed. The colorings comprise rich, deep red, soft pink and pure white. Plants grow 5 to 8 feet high. Blossom from July until late Autumn. Pkt., 15c.

5370. *H. Crispum Eye*. Flowers are pure white, with a rich crimson eye. The flowers are very large, often measuring 7 inches in diameter. It blooms from seed the first year sown in the open ground, lasts year after year. Pkt., 15c.



**Honesty. Satin Flower.** Early flowering, hardy biennial with purple or white flowers, and flat round seed-vessels of silvery appearance. Rather curious, but beautiful, and very useful, as house ornaments, 2 ft.

5375. Purple. Pkt., 15c. 5377. White. Pkt., 15c. 5380. Mixed. Pkt., 15c.

5382. **Iberis sempervirens. Perennial Candytuft.** Very desirable plants growing 10 to 15 inches high with glossy, dark, evergreen foliage completely hidden with dense flat heads of white flowers in early Spring. Pkt., 15c.

5385. **Lavandula Vera. Lavender.** The delightfully fragrant old fashioned plant grown so much for perfuming linens, for which purpose the dried flowers are used. Hardy perennial about 18 inches high. Pkt., 15c.

5390. **Liatris. Blazing Star.** Very showy and attractive plants with long spikes of purple and rosy purple flowers from July to Sept. Mixed varieties. Pkt., 15c.

**Linum perenne.** A pretty plant for the border, with light graceful foliage and large flowers produced through the entire Summer. Flowers delicate light blue and pure white; similar to miniature single Poppies, 12 to 15 inches high.

5395. Blue. Pkt., 15c. 5398. White Pkt., 15c.

5400. **Lobelia. Cardinalis.** (Cardinal Flower.) Standing bold and erect with its crimson-scarlet flowers, this handsome, native perennial Lobelia is invaluable for the border or grouping among evergreens. 2½ ft., Pkt., 15c.

**Lupinus polyphyllus. Lupine.** This will be found a great acquisition to any garden. It forms dense bushes about 4 feet high, of elegant spikes completely clothed to the ground with snowy-white and deepest sea-blue flowers. See illustration page 66. Delicately fragrant.

5405. Rose. Very fine. Pkt., 15c. 5415. White. Pkt., 15c.

5410. Blue. Pkt., 15c. 5420. Mixed. Pkt., 15c.

5425. **Lychnis. Rose Campion.** Handsome plants of easy culture, growing in any rich garden soil; for massing in beds and borders; blooms the first year if sown early. Flowers white, scarlet, orange, etc. Mixed colors, pkt., 15c.

5430. **Chalcedonica.** Fine scarlet flowers; 2 feet. ¼ oz., 25c., pkt., 15c.

5435. **Haageana.** Brilliant orange, scarlet, crimson, etc., in mixture; 1 foot. ¼ oz., \$1.00, pkt., 15c.

5440. **Viscaria Splendens.** Bright rose-red, very showy. 1 foot ¼ oz., 50c., pkt., 15c.

5445. **Lythrum roseum superbum.** Pretty, hardy perennial; grows three feet high and produces spikes of rosy flowers from July to September. Pkt., 15c.

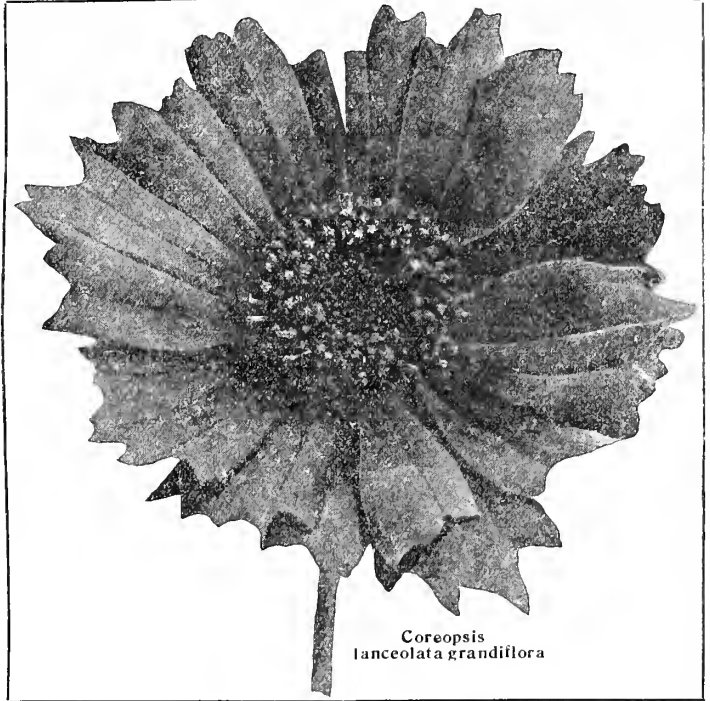
**Mimulus.** Showy, profuse-flowering plants, comprising numerous varieties with white, sulphur and yellow grounds, spotted with crimson, scarlet and pink, fine for green-house or moist, shady situations; half hardy perennials, blooming the first year from seed if sown early; 1 ft.

5450. **Tigrinus. MONKEY FLOWER.** Fine mixed, spotted varieties. Pkt., 15c.

5455. **Moschatus. MUSK PLANT.** Fine for hanging baskets, etc.; small yellow flowers. Fragrant foliage. Pkt., 15c.

5460. **Monarda. Oswego Tea or Bee Balm.** Fine hardy plants of free growth, about 3 feet high, with aromatic foliage; bright rose and crimson-scarlet flowers in July and August. Mixed, pkt., 15c.

**Myosotis. Forget-Me-Not.** Half-hardy perennial, which flowers the first year from seed if sown early. Will bring forth lovely blossoms throughout the whole Summer and Fall. Flowers are borne on long, stiff stems and of the most exquisite sky-blue, with a delicate white center. They succeed best with moisture in a somewhat shaded position. Few spring flowers are more admired than the lovely Forget-Me-Nots, which are especially effective when grown in masses. Perennials and hardy if given slight protection through the winter. Seed may be sown any time from spring till mid-summer. The Alpestris



Coreopsis  
lanceolata grandiflora

#### Myosotis. (Continued.)

varieties and Dissitiflora come into bloom in April, and are largely used for bedding or borders in connection with spring-flowering bulbs, Pansies, etc. The Palustris sorts do not bloom till May, but continue till fall.

5465. **Alpestris Blue.** Rich indigo-blue flowers. The finest and most effective dark blue variety; 9 inches. ½ oz., 50c.; pkt., 15c.

5470. **Robusta Grandiflora.** Of strong, sturdy growth, about 10 inches high with good heads of clear Forget-Me-Not blue flowers. ½ oz., 50c.; pkt., 15c.

5475. **Victoria.** A favorite sort, with fine head of large, clear, azure-blue flowers; plants bushy and compact; makes a fine edging or bed. ½ oz., \$1.25; pkt., 15c.

5480. **Dissitiflora.** Of dwarf, compact habit, with sprays of large, exquisite blue flowers, especially adapted for planting among spring-flowering bulbs. ½ oz., \$2.50; pkt., 25c.

5485. **Palustris Semperflorens.** An everblooming variety, beginning to flower in May and continuing till autumn. Large, clear, blue flower in pretty sprays. Pkt. 25c.

5490. **Pentstemon. Beard Tongue.** Attractive plants, much used in the hardy border. The bushes are pyramidal, 2 to 3 feet high, with erect branches thickly set with flowers 1½ inches long, varying in all shades from rosy-white to purple with white or veined throats. Mixed colors, pkt., 15c.

5495. **Mixed.** A mixture of blue, rose and white-flowered varieties. ½ oz., 50c.; pkt., 15c.

5500. **Physostegia. False Dragon Head.** These handsome plants flower from July until frost, growing 3 to 4 feet high and bear broad, dense spikes of delicate pink tubular flowers not unlike a giant Heather. Pkt., 15c.

**Platycodon. Japanese Bell-Flower.** A member of the Campanula family, with handsome, branching spikes 2 to 4 feet high. Platycodon is considered by many the best bell flower. The illustration, page 68, shows one of the blooms with which the whole spike is furnished. They bear these large, showy, deep-blue flowers continuously from July until frost.

5505. **Grandiflorum Album.** Pure white variety. Pkt., 15c.

5510. **Grandiflorum.** Tall, deep-blue. Pkt., 15c.

5515. **Mariesi.** Dwarf, deep-blue. Pkt., 15c.

5520. **Japonicus Fl. Pl.** (Double Japanese Bellflower). Large, glossy deep-blue flowers. The inner petals alternate with the outer ones, giving the flower the appearance of a ten-pointed blue star. Pkt., 15c.

**Perennial Poppies.** These hardy varieties are very beautiful, blooming from June to frost.

5525. **Iceland Poppy.** Similar to the annual Shirley Poppy but in addition to the white, red and pink shades of the latter, the Iceland Poppy is often a fine yellow or orange color. Pkt. 15c.

5530. **Oriental.** (The Large Oriental Poppy). A charming summer-flowering hardy plant, producing numerous leafy stems about 2½ feet high, with large deep crimson flowers; having a conspicuous black blotch on each petal, exceedingly showy. ¼ oz., 50c.; pkt., 15c.

5535. **Oriental Poppy Mixed Hybrids.** One of the most gorgeous of all perennials, producing in June and July its enormous blossoms, often 6 inches in diameter. The colors range from soft blush and rose to flaming scarlet and richest maroon. The flower stems are long and heavy, bending gracefully under the weight of the blossoms. The culture is simple if the directions at the top of page 64 are followed. The plants are at their best when about 3 years old. Often one specimen will show 10 or 15 blooms. All colors mixed. Pkt., 15c.

5540. **Salmon Queen.** An Oriental Poppy of an exquisite shade of salmon pink; fine for cutting or for a border plant. Pkt., 25c.

5545. **Perry's White Oriental Poppy.** A striking novelty, and the most distinct break that has yet been made in Oriental Poppies, it being a pure satiny white, with a bold crimson blotch at the base of each petal. Pkt., 25c.

**Polemonium. Jacob's Ladder.** Highly ornamental perennial; foliage deeply cut; flowers in clusters of blue and white. 5550. Deep Blue. Pkt., 15c. 5552. Pure White. Pkt., 15c.

5555. **Polygonum compactum. Knotweed.** Excellent hardy perennials of dwarf habit, forming bushes 12 to 15 inches high, which are completely covered with a mass of foamy white flowers throughout the Fall. Pkt., 15c.



New White Oriental Poppy.



**5610. Stokesia Cyanea. Cornflower Aster.** Grows from 18 to 24 inches high. Bears freely, from July to October handsome, blue, aster-like blossoms, measuring 4 to 5 inches across. Succeeds well in open, sunny location. Also fine for the hardy border and for massing. Pkt., 15c.

**Sunflower. Helianthus.** Seeds sown early will produce flowering plants the first year. Hardy perennial Sunflowers are fine subjects for the border.

**5615. Maximiliana.** Single, clear yellow, with several rows of large ray petals and full center. Blossoms in late Autumn. Height, 6 feet. Pkt., 15c.  
**5620. Mollis.** Rich, bright yellow flowers with silvery white foliage. Height, 6 feet. Pkt., 15c.  
**5625. Multiflorus fl. pl.** Dwarf double yellow like an Aster; blooming in August. Pkt., 15c.

**Sweet William. Dianthus Barbatus.**

A beautiful, free-blooming, hardy perennial producing a splendid effect in beds and borders with rich and varied flowers. The demand for separate colors has induced us to offer several sorts.

**5630. Single White.**.....Pkt., 15c.  
**5635. Single Crimson.**.....Pkt., 15c.  
**5640. Single Scarlet.**.....Pkt., 15c.  
**5645. Single Velvety Black Maroon.** Pkt., 15c.  
**5650. Pink Beauty.** A distinct new color. For mid-season mass-bedding it has no equal. Perfectly hardy. Pkt., 15c.  
**5655. Scarlet Beauty.** A splendid companion to the above. Intense rich, deep scarlet, and most effective for the old-fashioned hardy border. Pkt., 15c.  
**5660. Holborn Glory.** A large-flowered selection of the auricula-eyed section, the most beautiful of all Sweet Williams. Individual flowers and trusses are of extraordinary size, superb range of color, all showing white eye. ¼ oz., 35c; pkt., 15c.  
**5665. Latifolius Atrococcineus, Fl. Pl.** (Everblooming Hybrid Sweet William.) A brilliant crimson-scarlet variety that is very effective in any position. One of the best perennials in the list. Pkt., 15c.  
**5670. Single Mixed.** All colors, Pkt., 15c.

**5680. Tritoma. Red Hot Poker.** Although these are hardy plants, many will flower the first year if seed is sown early. They grow about 3 feet high and bear in August blazing, orange-red spikes, blooming until frost. Very effective for cut flowers. Pkt., 15c.

**5685. Verbascum Hybrids.** Ornamental plant growing 3 feet high. Long silvery foliage from which slender spikes arise, well furnished with flowers in all shades of pink and violet. Excellent for cutting or for use as a single specimen plant. Pkt., 15c.

**Veronica. Speedwell.** **5690. V. Spicata.** Height, 18 inches, flowers all Summer; showy spikes of bright blue flowers. Fine for cutting. Pkt., 15c.

**5695. V. Rosea.** Bright rose-colored flowers, produced on spikes 12 to 18 inches long. Pkt., 15c.

**Wallflower.** Half hardy perennials bearing dainty, yellowish, red or orange flowers which have a delicious fragrance.

These new, early-flowering varieties may be treated as annuals, and if sown in heat during February or March, the plants will bloom freely through the Summer and Autumn. Excellent for forcing. Height 2 feet.

**5700. Single Mixed.** All colors. Pkt., 15c. **5705. Double Finest Mixed.** Pkt., 15c.

**5710. Paris Extra Early. Single.** ¼ oz., 25c; pkt., 15c.

**5715. Goliath. Single red.** Pkt., 15c.

**5560. Potentilla. Dark Red Cinquefoil.** This plant has just the good qualities one expects in a border plant, handsome foliage, free-blooming habit and easy culture. It grows 18 inches high, bearing from July to Autumn its brilliant dark red flowers in profusion. These blossoms are much the shape of a Buttercup. The plant is of bushy growth, throwing up each year its stiff, erect stems, in appearance resembling a low shrub more than the ordinary perennial plant. Pkt., 15c.

**5565. Primula Japonica. Japanese Primrose.** These are not so well known as they deserve; they are hardy, of free, vigorous growth, with dark green foliage, and send up in the late Spring innumerable sprays of large flowers in many colors varying from white to crimson. A moist, rich, almost boggy soil is wanted for this fine plant. Very fine for naturalizing in grove or on a hillside. Mixed colors varying from rich crimson to white. 1½ feet in height. Pkt., 15c.

**5570. Pyrethrum hybridum.** Bears large daisy-like flowers ranging in color centers; fine for cutting. Blooms in early Spring and again in the Fall. Single varieties, all colors mixed. Pkt., 15c.

**Rudbeckia. Cone Flower.** Splendid plants for interplanting with shrubbery or for a tall border. They are free-flowing with blossoms like a small sun-flower, as suggested by the illustration below. These are borne on strong, erect stems, excellent for cutting. They are of remarkably easy culture, seldom attacked by insects or disease. The plants should be staked when 3 feet high. Keep blossoms cut to prolong the blooming season.

**5575. R. Newmanii.** Magnificent Autumn flowering perennial; flowers large, bright orange-yellow petals; center maroon, cone-shaped. 3 feet. Pkt., 15c.

**5580. R. Purpurea.** A most striking hardy perennial; flowers all Summer; very large, reddish-purple, an unusual, but attractive color 3 feet. Pkt., 15c.

**5585. Saponaria Caucasica flore pleno.** (Double-flowering Bouncing Bet). Hardy perennial white tinted rose, double flowers, produced all summer and fall, very profuse bloomers; 15 inches. Pkt., 15c.



**5590. Scabiosa caucasica.** While resembling in shape the annual Scabiosa, this variety bears large blossoms of a delicate lilac blue shade. The plants grow about 2 feet high, blooming from July until frost. A fine plant for borders or cut flowers. Pkt., 15c.

**5595. S. perfecta.** Outer petals azure blue, center lilac. Unusually fine. Pkt., 25c.

**Statice.** (Sea Lavender.) Splendid hardy perennials, either for border or rocky, producing all summer panicles of minute flowers, which can be dried for winter bouquets.

**5600. Latifolia.** Purplish-blue flowers. Pkt., 15c.

**5605. Mixed.** Containing many sorts. Pkt., 15c.



# SELECT NORTHERN GROWN FIELD SEEDS

## OATS

**Culture.** Sow Oats at the rate of 2 to 2½ bushels per acre very early in the Spring on a well prepared field with a modern disk grain drill. Deep seeding on heavy clay soils is often fatal to the crop. Two inches is deep enough on a fine, compact seed bed. Where the soil is loose and lumpy a roller or clod crusher followed by a light harrow will increase the yield effectively. This is especially true when a drought occurs early in the growing season. Do not neglect to treat your Oats with formaldehyde before planting. One pint makes about 5 gallons, enough for five bushels of Oats.



### Northrup, King & Co.'s Lincoln Oats.

Oat as was ever introduced for growing in the Northwest. We believe the Lincoln to be as fine an Oat as was ever introduced for growing in the Northwest. We make this claim after more than thirty years, during which time it has been grown by thousands of farmers over a wide territory and under various conditions of soil and climate. We introduced this Oat in 1893. It was a fine Oat then; it is even better to-day. Our sales have steadily increased from year to year, until now it is difficult to supply the immense demand. Why has it become so popular? Because of the reputation it has attained people will have it, and insist on genuine seed.

**Earliness.** This is not the earliest Oat, as its size and heavy yield cannot be attained in the shortest period, but it matures between the small, early Oats and the late varieties. It gives a yield and a quality which will please the most exacting grower.

**Adaptability.** Our Lincoln Oats are grown in the Northwest and are well acclimated to the extreme weather conditions which exist here both in Spring and Summer. Oats that will grow and thrive and produce big yields in the Northwest, will do well most any where, and under nearly all conditions.

**Straw.** A most essential point in successful Oat growing is to have a variety with stiff, strong, heavy straw. The Lincoln Oat is especially valuable in this respect. It stands up under heavy winds and rarely, if ever, does it lodge. Even on rich soil it gives the most satisfactory results. Another characteristic of the Lincoln Oat is its remarkable stooling propensity, which accounts in part for the heavy yield. On account of its strong, robust, healthy growth it resists rust when other sorts are greatly damaged by this disease. No Oat is entirely rust-proof, but we believe the Lincoln to be as nearly free from rust as any Oat can be. Lincoln Oats have a spreading or sprangle top head.

**Quality.** The Lincoln Oat has a thin hull, a heavy meat and soft nib. Whether for home consumption or for market, these points of merit go a long way towards deciding the value of your crop. In addition, the color is a fine white, bright and clean.

**Iowa Oats.** An extra early white oat of the Kherson type from the Iowa experiment station. Has remarkable ability to stand up well on rich ground. The straw is wonderfully stiff and short. This variety ripens very early with uniformly high yields.

**Green Russian Oats.** A very good early oat of the open panicle variety. Kernel is of medium size white to yellow in color, long and plump. Has weight of about 36 lbs. per bu. as it comes from the thresher.

**Swedish Oats.** Swedish Oats have given such general satisfaction that we know many will still adhere to this favorite. For the benefit of these we have secured seed which is of the usual high standard. At the Wisconsin Experiment Station it has stood at the head of the list for several years, having been distributed by that station as Wisconsin No. 4. Prof. Moore of Wisconsin, says of the Swedish Oat, "The most satisfactory of all." Prof. Carleton of U. S. Department of Agriculture says, "Probably the best American Oat." Prof. Shepard of the North Dakota Station says, "They are the best drought resister of all our new plants."

Its habit of growth is so vigorous that on heavy soils it is likely to lodge, but for light soils it has no superior. The name of the dealer in your vicinity who can supply our seed will be furnished on request.

**Sixty Day Oats.** The seed of this valuable Oat was secured in Russia by the United States Department of Agriculture in 1901. Some was sent by the Government to the South Dakota Experiment Station. It is similar to the Kherson Oat, which has been a marked success in Nebraska, but it is adapted to a section somewhat farther north than that variety. In North Dakota the Sixty Day Oat has headed the list of varieties under trial for many years. It is a small yellowish Oat that weighs about 34 pounds a bushel; the hull is very thin.

The Sixty Day Oat has made a fair crop when other varieties failed entirely. It is so early that it may be harvested with barley, and is three weeks ahead of most other sorts. The average yield of Sixty Day Oats at the Minnesota Experiment Station has been 64 bushels an acre. This is not a side Oat. On account of its thin hull the type of Oat to which Sixty Day and Kherson belong is higher in feeding value than most other varieties. In many tests these varieties have ranked highest in the proportion of whole grain to kernel. For this reason Sixty Day Oats were worth about three cents more per bushel for feeding purposes than common Oats.

**Silver Mine Oats.** This Oat has a reputation as an exceedingly heavy and reliable yielder. It is very hardy and prolific and yields beautiful white kernels, which are especially desirable for the manufacture of rolled oats. The heads are very large in proportion to the stiff, bright, clean straw. The sprangle top heads, although long, are borne low down on the stalk which seems to prevent lodging. We suggest early orders to avoid disappointment.

**Kherson Oats.** These Oats originally came from Russia, where they were known as the best extra early, hardy, good yielding Oats. Kherson Oats, when ripe are a beautiful yellow in color. They have fine large sprangles of full heads. The leaves are broad and extend nearly to the roots. They are a good yielder under favorable conditions. They do much better than many other varieties in dry seasons, giving a fair crop when other varieties yield hardly 10 bushels to the acre. This variety is especially adapted to soils where others would lodge as it has a short, stiff straw, bearing grain nearly one-half its length. It is an immense yielder and on account of its earliness usually escapes rust when other varieties may be entirely ruined. Kherson Oats ripen with barley and the extra early wheats, hence they make splendid succotash mixtures when grown together.

**White Russian Oats.** A good side oat. Originated in Russia but has become thoroughly acclimated and popular here. A medium late variety and as rust proof as it is possible for an oat to be. A heavy yielder in the north. Matures with blue stem wheat. Very hardy and disease resistant.

### Iowa No. 103 Oats or White Kherson.

Originating from stock bred by the Iowa Agricultural College, the Iowa No. 103 Oat has proved its value as a heavy-cropper. One hundred bushels per acre is not unusual. From the first, great care has been used in breeding and selection of the seed and its record on hundreds of farms has justified the faith of its originators.

This variety is a favorite in Iowa and preference for it is increasing rapidly on account of its earliness and apparent freedom from blight or rust. The grain is not large but is plump and heavy, with a thin hull. During growth the yield is deceiving but the results at threshing time prove its value as a prolific producer of grain high in food value. The straw is of excellent strength and on good soil stands up unusually well.



Northrup, King & Co.'s  
Lincoln Oats.

### Care In The Selection Of Seed Grains.

There is much trading between farmers with seed grains. Seed houses supply comparatively little of the total seed grain planted each year. Knowing the care with which we select, clean and grade such seed, and knowing also the inferior cleaning equipment used by most farmers, we are sure farmers will find it to their advantage to plant Northrup King & Co.'s Seed Grains. It may cost a trifle more because more effort has been put into protecting its quality, but the extra yields usually much more than pay its extra cost. Our experienced seed buyers cover all the best growing areas of the Northwest and are on the alert for choice seed of many sorts. Our acquaintance with good farmers who specialize in certain varieties also is a great advantage in enabling us to get the best the year has produced. Then, too, dealers will understand that it is very important for us to maintain the standards set for our different brands and our extensive laboratory and cleaning plant work closely together to produce the quality shown on the test tag attached to each bag of our seeds. Encourage your farmer patrons to compare seed qualities in relation to their prices rather than merely considering price. It costs just as much to plant and cultivate a poor crop as a good one. Any farmer will always find it pays to plant the best seed grain he can get. Quality is more frequently assured by the trade mark on the bag than the price asked.



## SPRING WHEAT

Sow about  $1\frac{1}{2}$  bushels per acre.

**Marquis Wheat** was originated by Chas. and William Saunders of Ottawa, Canada, by crossing Red Fife and Hard Calcutta, a native Wheat of India which had become acclimated to northern conditions. The first experiments were conducted in 1886, and it was not until 1903 that it was fully developed. By scientific cross breeding, a variety was produced that inherited the remarkable earliness of the Calcutta, and the frost-resistant and yielding qualities of the Red Fife. The original stock of seed was very small, but by careful husbandry the amount was gradually increased so that it might be disseminated throughout America.

**Earliness.** Marquis Wheat is from one week to ten days earlier than Red Fife and this fact alone should induce many of our customers to grow it this Spring. Farmers everywhere appreciate earliness and what it means to the Wheat grower at a time when rust, smut, drought or hot winds may take his crop at any time. This week or ten days may save his entire crop from loss.

**Productiveness.** Marquis Wheat has out-yielded all other Spring Wheats grown under the same conditions of soil, cultivation and climate. The increased yield varies from 5 to 10 bushels per acre. Threshing reports from the three, big, hard Spring Wheat states this past season indicate the same favorable increase in yield of Marquis over other varieties, as has been the case every year since Marquis was introduced.

**Appearance.** Marquis Wheat is similar in appearance to Red Fife, but the heads, as a rule, are heavier and the straw shorter, making it less likely to lodge. The kernel is flinty, a little darker in color than Red Fife, being dark red, and more plump than that variety. It is beardless, having smooth, yellow chaff. Under certain climatic conditions a small percentage of the heads sometimes show a reversion to the Hard Calcutta parent by bearing beards. Otherwise these heads are identical with the bald heads, maturing at the same time and containing the same size and shape of kernel. It weighs from 64 to 66 pounds to the measured bushel.

**Manshury Barley.** We believe this to be as fine a Barley as was ever offered the farmers of the United States. Manshury Barley represents the combined efforts of State and National Experiment Stations and private work of Barley experts to produce a variety which will yield plump grains with the greatest protein content, as well as strong, stiff straw and long, well filled heads. In quality both as to feeding value and for malting purposes no other Barley excels it. It yields abundantly. It is early and very vigorous in growth. The straw is strong and stiff. Seldom does a field of this grain lodge. The heads are long and well filled, the grain plump and of the best quality.

This Barley was selected on account of its yield, its desirability as a feeding and malting Barley, and the ready sale with which it meets on account of its good color.

Those desiring to obtain seed to replace run out varieties will do well to purchase at least one or more bags of Manshury.

**Six Rowed Barley.** Some very fine quality barley is grown every year in the vicinity of Minneapolis and we are able to secure this seed. By carefully selecting the very best lots and re-cleaning them we are thus able to offer you an unusual opportunity to change your seed and buy fine Six Rowed Barley at low cost. This variety has strong, stiff straw, is vigorous in growth and yields well. The grain is plump and of excellent quality for feeding or milling purposes.

The U. S. Dept. of Agriculture advises farmers in Bulletin No. 443 as follows: "The seed is a vital factor in the production of good Barley, for it contains the germ and food material to start either a strong and vigorous plant or a weak and puny one. If the seed is small and shriveled, maximum yields cannot be expected." Bearing this in mind, we have taken great pains to select extra good seed Barley to start with, and then clean it thoroughly by special machinery so that it will be of superior quality. We recommend it strongly as a good yielder under favorable conditions.

**Macaroni or Durum Wheat.** Sent out by the United States Department of Agriculture under strong recommendation as to its great value for semi-arid lands where good crops of Spring Wheat could not ordinarily be produced, has more than justified every claim made for it. The acreage of this variety is increasing every year in spite of the opposition of some millers. It outyields by far any other variety of Spring Wheat, and it has been demonstrated that it makes bread superior to that made from the best Fife Wheat flour, and has proved to be practically immune to the dreaded rust. In growing it resists extremes of weather which no other Wheat will endure.

In the field this Wheat grows very strong and with surprising rapidity, so rapidly as to get well ahead of the weeds. It does not shell or bleach and is also hail proof owing to the tightness of the hull. The straw is very strong.

## WINTER WHEAT

### NORTHWARD ADVANCE OF WINTER WHEAT

Since the introduction of the hardy varieties of wheat from southeastern Europe there has been a decided northward movement of the winter-wheat area. This has been going on rapidly in recent years. The reasons therefor are the generally larger yields of winter wheat, due (1) to its earlier maturity, thus enabling it to escape hail, hot winds, disease, etc.; (2) to its greater drought resistance and (3) to the better division of labor which it allows through fall seeding and earlier harvesting.

The average yields in Iowa for five years show an advantage of 4.8 bushels in favor of winter wheat over spring wheat. The results of a 4-year test in Minnesota show a similar advantage of 8.5 bushels. With this evidence at hand it is seen that the region in which winter wheat is grown should be extended northward as rapidly as possible, making use of the hardy varieties and more hardy strains as these are developed, and that the spring varieties should be used only in cases where the fall-sown wheats are winterkilled or where winter-wheat growing has been found by trial to be unprofitable. Large plantings of winter wheat should not be made in any locality, however, until it has been determined by tests lasting at least three years whether or not winter wheat will succeed. U. S. Dept. of Agriculture. Bulletin No. 616.

We list only the varieties which have been shown, by test, to be profitable in the northwest.

**Minturki Winter Wheat.** A very hardy variety, in fact the hardest of hard winter wheats. Red beard with strong straw. Originated from a cross between Turkey and Odessa, the crossing being accomplished at the Minnesota Agricultural Experiment Station in 1902 and was first distributed in 1919. It has outyielded other varieties of winter wheat in Minnesota and seems to be particularly adapted to this state. It has shown good comparative milling and baking quality.

**Turkey Red Winter Wheat.** This has been a popular variety here for a number of years. Medium hard, bearded, produces large heads. The grain is large and does not shatter out as badly as some other varieties, grows tall with stiff straw.

## BARLEY

### Oderbrucker or Wisconsin No. 55 Barley.

On account of Barley being one of the staple crops, the State Experiment Station of Wisconsin has given particular attention to the breeding of Barley to obtain big yields, protein content and other qualities which are essential for both malting and feeding purposes. Oderbrucker or Wisconsin No. 55 is considered the best variety of Barley sent out by the Wisconsin Station. Prof. Moore declares it to be superior to the Manshury, yielding 5 to 10 bushels more an acre. Oderbrucker is a stiff-strawed, heavy yielding, six rowed, bearded variety. It is about the same as Manshury in time of maturity, manner of growth and general appearance, but has a plumper kernel and weighs more to the measured bushel. Prof. Moore says: "In stiffness of straw and rust resistance it is superior to any other variety on test." Two bushels of Barley will seed an acre.

**Improved White Hulless Barley.** While it has sufficient hull to hold it in the head, these hulls are readily separated in threshing. The absence of beards makes it safe to feed to all kinds of stock. Its earliness is a characteristic which is especially desirable. It will mature in 60 to 90 days, according to soil and locality. In Montana the farmers use it very extensively as a catch crop. White Hulless Barley has been sown in June and had ample opportunity to mature, provided there was sufficient moisture in the ground to start germination.

The grain is exceedingly heavy, weighing from 60 to 63 pounds to the measured bushel. The yield varies according to soil and climatic conditions, but it can be depended upon to produce from 35 to 80 bushels an acre. Its nutritive value is very great. It is fed to work-horses at the rate of 2 quarts where 4 quarts of oats would be required. The best way is to mix it with oats and grind the two together for horse feed. It is also very valuable for feeding poultry, hogs and all kinds of stock.

It is often grown for hay, coming very early and providing rich feed. It should be cut just before it becomes ripe and while the straw is green. In this condition it is relished by all kinds of stock. The straw is stiff and straight, and seldom if ever does it lodge.

For grain sow  $1\frac{1}{2}$  bushels to the acre; for hay, 2 bushels.



## SEED FLAX

**Culture.** Flax should not be sown on same land oftener than once in seven years. Treating the seed with formaldehyde before sowing, is often advisable. Before sowing, the ground should be thoroughly prepared and it is especially important to have the soil well firmed. Be sure there are no open spaces in the bottom of the furrows as these are likely to cause the roots to rot. Sow 25 to 30 pounds per acre; sow as early as possible and yet avoid the last killing Spring frost. In the southern counties of Minnesota Flax may be sown as late as June 20th, although this will depend largely upon the season.



### Northrup, King & Co.'s Northland Brand Seed Flax.

The greatest value for a reasonable price, of uniformly superior quality, carefully selected for high purity and strong germination. The Northland Goose is on every bag.

Prof. Bolley of the N. D. Experiment Station especially recommends "plump, bright colored seeds—because they probably grew upon strong or vigorous mother plants and are thus not likely to be internally diseased." Northland Brand Flax is meeting with approval throughout the Northwest. It ripens in midseason and under favorable conditions, yields splendidly.

Cleaning Flax so as to make it suitable for seed is an expensive operation, requiring special machinery and often involves considerable waste, but we take great care to do this thoroughly. Mustard, being the same size and weight is very difficult to remove.

## SPELTZ OR EMMER

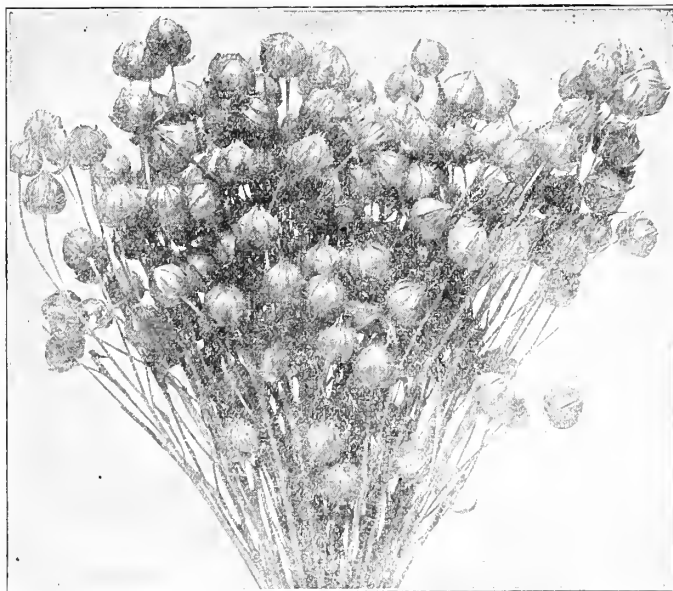
Speltz has now been grown in the United States in a large way for several years and each succeeding season not only emphasizes its value, but sees its production increasing to an enormous extent. It is found to be adapted to a wide range of soil and climate, to resist extremes of weather, to be of excellent feeding value and to yield so much more heavily than oats and barley as to insure its increasing popularity and its eventual place among the leading and standard cereal crops of the world. Those who have not grown Speltz should not let another season go by without giving it a place and an important place, too, on their farms.

It is readily eaten by all kinds of stock and has shown itself to be especially adapted when fed to milch cows. It is better to mix it, however, with bran and shorts as it is a pretty heavy feed when fed alone. As a swine feed, we think very well of it indeed, especially for brood sows. While not quite equal to oats, it makes a fair horse feed.

Its most striking value is found in its drought-resistant qualities. Drill two bushels per acre.



A Field of Buckwheat in Bloom. Fine for Bees.



Heads of Flax

## BUCKWHEAT

**Seeding.** Sow  $\frac{1}{2}$  to 1 bushel per acre, as late as possible and still have crop well developed before severe frosts occur. Light, well-drained soils are best for this crop.

**Japanese Buckwheat.** Entirely distinct from all other varieties. It has the advantage of remaining for some time in bloom and produces seed earlier. On this account it can be grown farther north. It resists drought and blight very well. The seed is rich dark brown in color and larger than Silver Hull. As much as forty bushels to the acre have been harvested of this variety making it very profitable to raise. Buckwheat is now sold at 50 lbs. to the bushel.

**Silver Hull Buckwheat.** This valuable variety originated abroad and is a decided improvement on the old black or gray sort. It is early, remains longer in bloom than other sorts. A fine variety for honey bees. The grain is of a beautiful light gray color, and has a thin husk. Millers prefer Silver Hull, there being less waste and it makes whiter, better and more nutritious flour than other varieties. Silver Hull is more productive and the grain meets with a more ready sale, bringing higher prices than the Japanese. Under favorable conditions it will yield 40 to 50 bushels an acre.

**Common Buckwheat.** Much of this grain is now being grown for one or more of the various uses to which it may be put. This variety bears medium sized, plump grain, mottled brown in color. The quality is good and the yield up to the average.

## RYE

**Spring Rye.** True Stock. Spring Rye makes an excellent crop where a fall crop has not been planted. It is desired it can be turned under and made to answer a good purpose in adding to the fertility of the soil. Sow seed same time as other spring grain. Does not grow quite so large straw as Winter Rye, but usually yields well and grain is of fine quality.

We wish to emphasize the fact that we sell the genuine Spring Rye, sown in the Spring and harvested the same season. We now offer an extra fine grade. To insure receiving enough for your requirements we advise placing your order early, as we have only a limited quantity. Sow about  $1\frac{1}{2}$  bu. per acre.



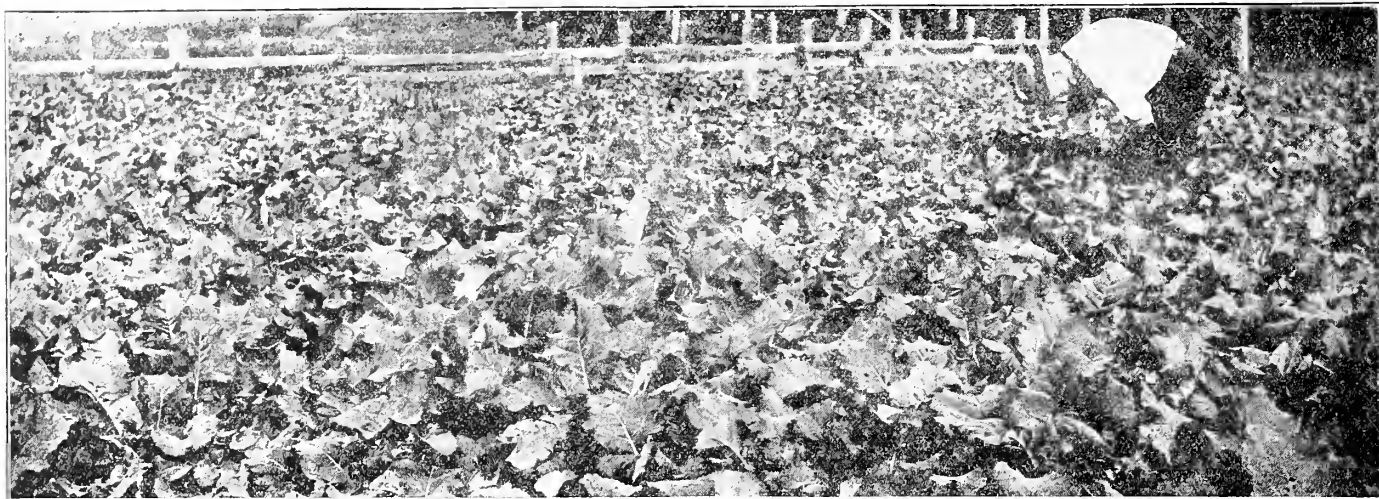
### Northrup, King & Co.'s Amber Winter Rye.

Amber Winter Rye is much harder than Wheat and can be grown on greater variety of soils. It will thrive in dry seasons and on light sandy loam. It is grown for grain, fodder, soiling purposes and green manure. Sow Aug. 20th to Sept. 15th— $1\frac{1}{4}$  bu. per acre for grain, and  $1\frac{1}{2}$  to 2 bu. per acre for Fall pasture. If drilled 2 to 2½ in. deep there will be less danger of Winter-killing. Makes an excellent pasture for pigs, calves and other young stock. It should be sown early in the Fall for this purpose. In the Spring sow about five pounds of Dwarf Essex Rape per acre on the Rye, which may be covered with a harrow without injury to the Rye.

Rye may be pastured very early in the Spring. The Rape will continue the supply of green feed when the Rye disappears. Try a Rye and Rape pasture and thus prove its value.

**Rosen Rye.** (Winter). This variety was introduced by the Michigan Experiment Station, and produces grain which is considerably larger than other Winter Sorts. The kernels are very plump and heavy, bright yellowish-blue in color. The straw is stiff and strong. It is a heavy yielder and is considered superior to any other Winter Rye.

## DWARF ESSEX RAPE



Dwarf Essex Rape is one of the most valuable forage plants, its many uses being fully considered, that has ever been introduced in the United States, and we take pride in having been the first seed house to bring it prominently before the farmers of America.

Now that the sale of Rape Seed amounts to thousands of tons annually, it is interesting, by way of contrast, to look back to the year when we introduced it, and find that our sales for the season were less than 500 pounds.

Under average conditions a yield of from 10 to 20 tons or more of green forage per acre may be expected. According to a recent government bulletin, one acre of Rape with grain will fatten 20 wethers in two months. Ten hogs eat about one-third of an acre in the same time.

It is an annual, bearing a close resemblance in leaf and stalk to the Rutabaga, but both leaves and stalks are more numerous in the Rape plant, and of a taller habit of growth. It is a pasture plant which may be eaten off by any kind of live stock, but it is preeminently fitted to furnish pasture for sheep, cattle and swine.

It should be from eight to twelve inches high when stock is first turned in and it ought to make growth enough to support at least ten sheep per acre during the growing period of the Rape crop. Rape makes a second growth from the standing roots when the livestock is removed, and may be repastured later. Successive sowings, made three or four weeks apart until July 1, will give a very satisfactory feeding crop throughout the entire Summer.

The Iowa Station recommends sowing 3 pounds of Rape seed per acre in the Corn field at the last cultivation or before, allowing hogs to pasture the Corn and Rape together. They have proved this to be a very profitable practice and it is being carried on in all parts of Iowa and in many adjoining states. This makes the cost of growing the Rape about 40¢ per acre and nets splendid returns.

**Culture.** Rape is best adapted to moist, rich soil in which there is plenty of humus. Slough lands are especially good. It grows best in cool, moist weather and the time for sowing depends upon when the crop is to be used. When wanted for pasture, allow 8 to 10 weeks for it to attain maximum growth. Sow 1 to 2 pounds of seed per acre in drills and cultivate, for a weed-cleaning crop. For broad-casting, use 5 pounds per acre on rich, weed-free soil so that the Rape will not be choked by weeds. For continued hog pasture, sow Rape early and at successive intervals. It may well follow any grain crop and is always splendid to plow under for green manure.

## ANNUAL HOG PASTURE MIXTURE

It is called Annual Hog Pasture Mixture because when we commenced selling it many years ago it was intended primarily to supply pasturage for swine. It has, however, proved of such great economic value, not only for swine but all other live stock. It is made from many different grains and forage plants, the majority of which grow again as fast as fed down. No matter how much feed you have for your hogs, sheep and cows you can profitably grow our Annual Hog Pasture Mixture. The results will please you because this mixture furnishes the variety they need. Sown in the Spring, it comes in when other pasturage is apt to be at its worst, and continues green and bountiful all through the season until Winter. This makes it valuable, too, as a catch crop, for it may be sown as late as the middle of August. We have customers who grow as much as 20 acres of this mixture, but its great general use is in small pastures or paddocks near the barns where the stock may be handily turned in at any time. Those desiring to raise an increased number of sheep and swine should note the fact that its use decreases the cost of fencing, as an acre yields four or five times as much as most pasturage. One more point, keep it fed down. It is best when young and tender and springs up again with amazing rapidity. Plow bare patches in the hog lots and sow Annual Hog Pasture Mixture where it will soon cover the soil with a heavy growth of green feed.

Make all these waste patches about the barn-yards productive with sowings of Hog Pasture Mixture. Make the soil rich with stable manure; sow about corn planting time as the Mixture contains some seeds that require warm weather to germinate them and the plants may be injured by freezing if sown too early. The quantity of Annual Hog Pasture Mixture required varies according to conditions of soil and climate, but as a rule we recommend sowing 50 pounds to the acre.

## VETCH

**Sand or Winter Vetch.** (*Vicia Villosa*.) Sometimes called Hairy Vetch. This is a very valuable forage plant and is rapidly becoming more popular each year as the farmers of this country are learning more of its great value. It is very hardy, is valuable as a winter cover crop to prevent leaching, and for forage and fertilizing purposes. It is an annual, but re-sows itself and will come up year after year on the same ground. It succeeds well on nearly all soils and thrives surprisingly on poor, light land and will endure extremes of drought, heat and cold. It improves the soil, being a great nitrogen gatherer. The roots bear innumerable nodules of nitrogen-gathering bacteria. These take the nitrogen from the air and restore it to the soil where it is so much needed. It belongs to the Pea family, but the vines are much longer and the foliage is more abundant. The vines in the illustration were from the second crop and measure five feet and seven inches in length. These plants were grown within a few miles of Minneapolis. It may be sown either in the Spring or Fall with about half a bushel of Rye or Oats for support. It grows rapidly and is particularly valuable in sections where Clover does not thrive. In the North it remains green all Winter under the snow and it is invaluable for early pasturing or soiling. The Department of Agriculture estimates the value of an acre of this Vetch plowed under equal to commercial fertilizer at the rate of from \$16 to \$40 an acre. When sown in August or September it covers the ground before frost and prevents leaching of the soil during the Winter and Spring. When sown in April or May it can be cut in July, the second growth affording excellent pasture during the Summer. The yield of green fodder is from twelve to twenty tons an acre. This may seem to be an exaggerated statement but when the amazing stooling propensities of this plant are taken into consideration the yield is readily accounted for. As many as twenty long vines spring from each root. When raised for hay it should be left standing until some seeds have become well formed. We especially urge farmers of the Northwest to try Sand or Winter Vetch. 50 to 60 pounds of seed required to the acre.

**Spring Vetch.** Known also as Tares, English Winter Vetch, Oregon Winter Vetch or Common Vetch. Used for the same purpose as the Sand Vetch but must be planted in the Spring where the Winters are severe as this variety is not so hardy as Hairy Vetch. It succeeds wherever Canada Field Peas thrive. If sown alone, use 60 lbs. of Vetch per acre and if with Oats, 60 lbs. of Vetch and 40 lbs. of Oats are usually seeded.

Spring Vetch thrives in a well drained soil, doing best in loams or sandy loams though excellent crops are grown both on sandy and gravelly soils. On poor soils special care should be taken to provide thorough inoculation.



Winter Vetch, Second growth.  
5 ft., 7 in. long.



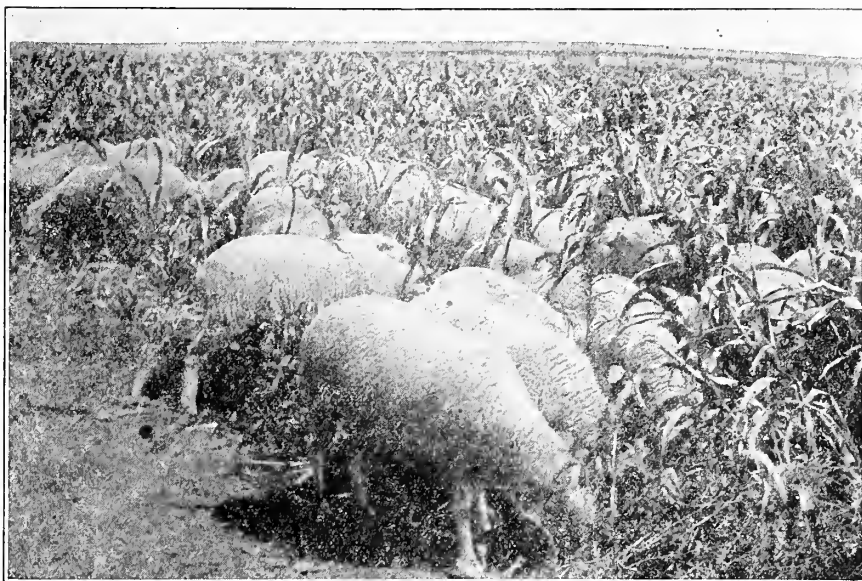
# FORAGE AND SOILING CROPS.

## SORGHUM OR SUGAR CANE.

Note the wide range of uses to which Sorghum may be put, and its great value in each case.

As a soiling crop, Sorghum will always prove of great value, since at least two crops can be obtained from one sowing. Milch cows are exceptionally fond of Sorghum. It is excellent for milk production and a given area furnishes a large quantity of succulent food. An acre of Sorghum yielding 15 tons of green forage would feed 50 head of stock for 10 days. It should be fed sparingly at first, to avoid bloating.

As a pasture crop for sheep and swine it has no superior. When grazed down it will quickly spring up again, thus a large amount of pasture may be obtained at a season when forage is scarce. Cattle should be accustomed to it gradually. Sorghum pasture is said to enable hogs to maintain a steady, profitable growth through the Summer. Mixtures of Sorghum with Barley or Oats have been found to give heavier yields than Sorghum alone. As a fodder crop it furnishes an enormous amount of feed. Sorghum outyields Fodder Corn, producing a richer and more nutritious feed of greater value. Thus it will be seen that utilized as a pasture, as a soiling and fodder crop, it may be made to furnish feed nearly the whole year round.



Sorghum, Grown For Pasture and Soiling

**Minnesota Sorghum.** Early Amber Cane. This is the earliest, richest and altogether the best sort for Northern latitudes, and is the only variety which can be relied upon for sugar or syrup in Minnesota. There are many hundreds of acres of sorghum being grown for syrup in Minnesota and other Northern states. In the district adjacent to Minneapolis, seed of the finest quality is obtainable and we get the choicest to be had. The acute sugar shortage of the last two years and the possibility of further economy being necessary, emphasizes the desirability of raising substitutes such as this on more farms. The cost is small compared to the large returns.

**Southern Cane.** This variety does not mature so rapidly as the heavier. When Sorghum is grown for fodder only, the Southern Cane will give the greatest tonnage and is usually grown on that account by dairymen, to feed their milch cows. It is also desirable when grown as a pasture plant for sheep, hogs or cattle. All kinds of stock eat it readily. Southern Cane is not suitable for making syrup when grown in the North, but for feeding purposes is splendid. See cultural directions above. It can be sown at the rate of 50 to 60 lbs. per acre.

**Kaffir Corn.** Grows 4 to 5 feet high. The stem or stalk bears numerous wide leaves. The stalks are brittle and juicy, not hardening like other varieties of sorghum. It makes excellent fodder, either green or dry, which is highly relished by cattle and all kinds of stock. The seed crop is also heavy, sometimes 50 to 60 bushels to the acre. For grain, sow in rows 3 feet apart, 3 to 5 pounds of seed to the acre. For fodder, sow  $\frac{1}{4}$  to 1 bushel either broadcast or in drills.

**Feterita.** A wonderful new grain which has attracted considerable favorable attention in Kansas, Missouri, and Oklahoma. It belongs to the Sorghum family. It was introduced from Africa by the United States Department of Agriculture. The advantages claimed for Feterita are its drought resisting qualities, its heavy yield, its earliness, its stooing propensities and its freedom from insect pests. It is of medium height and about equal to Kaffir Corn in feeding value. Feterita successfully withstood dry weather in Kansas and nearby states during 1913 and yielded under these unfavorable conditions, 35 bushels per acre and more.

## SUNFLOWER

**Mammoth Russian.** Sunflowers are especially useful in the shade for the young chicks, also the seeds make a good addition to the poultry ration. They are very rich in oil and protein and are splendid to feed during the moulting period and winter months. They are also valuable for hogs. Sow the seed in rows far enough apart to admit of cultivation. 2 to 3 pounds will plant an acre. The plants will grow from 6 to 10 feet high and will be literally covered with large heads well filled with seed.



The Mower Is Well Adapted to Harvesting Sudan Grass for Hay

Recently Sunflowers have been grown extensively in dry sections and high elevations for silage feeding purposes. Frost does not affect them as it does corn, and they withstand drought much better. The Montana Experiment station reports Sunflowers yielding about double as much as corn, securing as high as 36 tons to the acre under irrigation and 10 tons on dry land. The feeding value was also found to be equal to corn and no objectionable flavors were tasted in the milk. The North Dakota Station found Sunflower silage richer in protein than corn silage. For silage use 8 to 16 pounds of seed per acre, in drills 24 to 42 inches apart. Plants should stand 4 to 10 inches apart in the row. Under irrigation, plant the larger amount in narrow rows and for dry land, plant the smaller amount in wide rows. Little cultivation is necessary since the plants grow rapidly and soon shade the ground. Harvest with a corn binder when half to three quarters of the seed is in the milk stage. Run through a cutter and into the silo, same as corn.

## SUDAN GRASS.

This grass was introduced by the Department of Agriculture and it has been tested at several experiment stations. Prof. A. C. Arny of the Minnesota Experiment Station wrote us as follows:

*We have experimented with Sudan grass quite extensively for the past two years. As far as I can see at the present time, it looks as though Sudan grass could well take the place of Millet or any other annual hay crop. If sown about May first at the rate of thirty-five to forty pounds per acre, it may be cut some time in July just before heading out. This gives time for a second growth to reach the stage where it can be used for pasture or cut for hay. From the fact that Sudan grass may be used to produce two crops per year from a single seeding, it looks to me as though it should be preferable to Millet. This does not mean that Sudan Grass will replace Timothy or Clover but will doubtless compete with Millet wherever that is now grown.*

Perhaps the most important characteristic of Sudan Grass, and the one which will be of greatest value in stimulating the use of the crop for hay purposes, is its resistance to drouth. This characteristic is possessed by all members of the Sorghum family, but is probably more pronounced in the Sudan Grass than in any other types. The most critical period in the growth seems to be while the plants are quite small, or during the seedling stage. If the moisture at the time of seeding is insufficient for prompt germination or for the maintenance of normal growth until the plants are well established, permanent injury will result. After the plants have become established they will hold their own under trying conditions. It has been found that Sudan cannot be depended upon for a crop where the rain all during the growing season is less than five inches. Being a native of a warm climate, it thrives best in hot weather.

Sudan Grass belongs to the Sorghum family. It is an annual, lacking underground root stalks. Two cuttings can be obtained under favorable conditions, and growers near Minneapolis have reported two big crops. The yields vary from 1 to 8 tons of cured hay per acre.

Sudan Grass will grow in almost any soil, but the well drained, rich loams will however, give better returns than the lighter and poorer classes of soils. It does not require such rich soil as does Millet, and will withstand drought and humid conditions better. Sudan Grass, like other sorghums, does better in warm climate. According to Govt. Bulletins it is destined to be of greatest value in Central South Dakota, Western Nebraska, Western Kansas, Southern Oklahoma and throughout Kansas. In Southern Minnesota, Southern Wisconsin and Iowa it ranks with Millet as a catch crop and is valuable in locations where neither timothy nor alfalfa succeed well.

Because of its palatability and succulence it makes very good silage, especially when grown with soy beans. However, since it is so easy to cure into fine quality hay and there is no waste in feeding it, its use for silage is quite limited.

Sudan Grass when seeded broadcast or in drills averages about 3 to 5 feet in height and has stems a little smaller than a lead pencil, being about three-sixteenths of an inch in diameter. If grown in rows and cultivated it reaches a height of 5 to 9 feet, and the stems are larger being about one-fourth of an inch in diameter. The panicle is loose and open.

Sow Sudan Grass after the soil has become warm, about corn-planting time. It may be drilled from one-half to one inch deep. For seed production, sow 6 lbs. per acre in rows and cultivate. When broadcast, sow 16 to 24 lbs per acre. It may be cut with a mower or binder.

Special folder will be sent on request in which Sudan Grass is fully described, its cultivation and uses being outlined in detail.

## FIELD PEAS

"Peas could be made to bring more nitrogen to the soils of this country every year than is now purchased annually by the farmers at the cost of millions."—Year book of the U. S. Department of Agriculture.

The above statement, coming as it does from a reliable source, gives the progressive farmers of this great North-west something to think about. Grain has been grown year after year on many farms, sapping the life and fertility of the soil. Here is a crop which is not only profitable but will return to the land the much needed nitrogen. Peas are second only to Clover in their soil enriching properties and can be grown under almost any condition of soil or climate. There is always a ready market for Peas, or they can be profitably ground and fed to stock. The vines make rich, nutritious hay. If fed to milch cows, when green they increase the flow of milk. Peas are a paying crop and can be profitably planted in many ways.

First. When sown alone about three bushels are required to the acre. They can be matured and threshed when dry. The yield will vary from 30 to 60 bushels an acre.

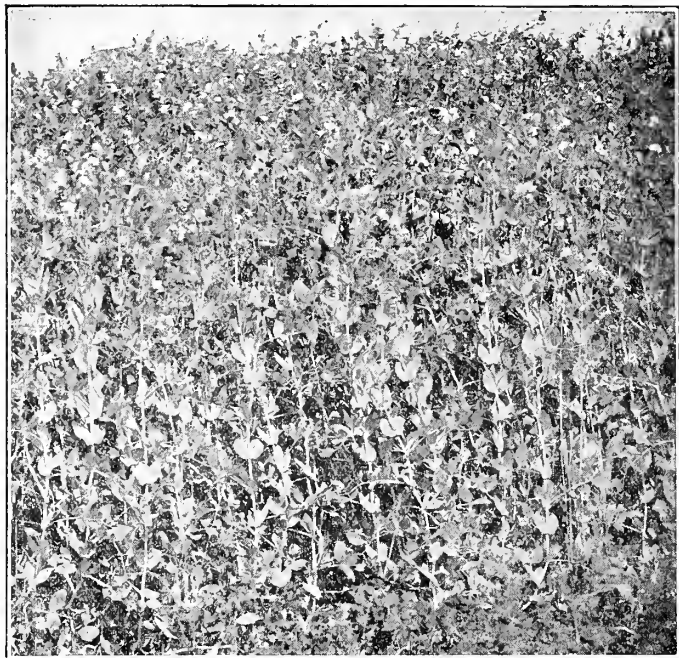
Second. Peas and Oats are frequently sown together, using  $1\frac{1}{2}$  bushels of peas and 2 bushels of Oats an acre. By so doing a double crop can be secured. They can be threshed at one time and readily separated in cleaning.

Third. They can be sown alone or with Oats and fed green. It is surprising the amount of fodder which is produced in this way. If sown together, sow Peas first and plow under four inches; then drill in the Oats.

Fourth. For plowing under when Peas and Oats are sown together and each are "in milk" they are nearly equal in value to Clover, used in the same way, to enrich the soil.

**Scotch Peas.** Grown largely for early green forage. Foliage is more rank and abundant than Canada Peas. Sow one to one and a half bushels per acre with Oats for support.

**Canada Field Peas, Green.** Height of vine  $3\frac{1}{2}$  to 4 ft. Of the same general character as Canada Yellow Field Peas. Used for the same purposes, but the seed is green in color instead of yellow.



Canada Field Peas four feet high at time of blossoming.

**Canada Field Peas, Yellow.** Height of vine  $3\frac{1}{2}$  to 4 ft. This is a standard variety of Field Peas and needs no special description. This variety is extensively grown in Canada, Wisconsin and other Pea growing sections, and has a large sale, not only for agricultural purposes, but for use in soups. It is also fine for pigeons and poultry.

**Golden Vine Field Peas.** Yellow. Height of vine,  $3\frac{1}{2}$  to 4 ft. A fine, vigorous variety. This strain is especially desirable on account of the heavy yield. On good soil it gives a very heavy crop and yields fairly well on land so poor as to be otherwise non-productive.

## SOY OR SOJA BEANS.

Valuable for silage, hay, for hogging off and as a soil improver. They resemble the navy bean in appearance but grow considerably taller. When planted with corn for silage the total yield per acre is increased and the feeding value of the silage improved. For hay they are valuable as an emergency leguminous crop where clover has been winter killed; equal to clover in feeding value and one of the best annual clover substitutes. The beans are approximately equal to oil meal in feeding value, making one of the best crops for hogging down either alone or with early corn. For an annual crop, Soy Beans are excellent as a soil improver, especially on sandy soil. Like clover they gather nitrogen from the air.

**Culture.** For silage, the usual amount of corn is planted and Soy Beans added at the rate of 10 lbs. per acre. Seed may be mixed in the planter box and stirred at each row end or planted from separate boxes. The two crops may be grown separately and mixed in the silo cutter three loads of corn to one of Soy Beans. The beans should be almost ripe when cut.

For hay, plant 60 to 90 lbs. per acre in rows 20 to 36 inches apart. Harvest when pods are well filled and leaves commence to turn. Allow to wilt in swath then rake up and place in small cocks. Curing sometimes requires several days and should be thorough. Soy Beans drop their leaves quite easily and should be cut before any number have fallen. They should be handled as little as possible to retain the most leaves.

For hogging off, plant 30 to 60 lbs. per acre in rows 20 to 42 inches apart. 20 inch rows can be made by straddling every other row with the corn planter. As soon as the beans mature turn in the hogs to harvest the crop. Soy Beans and Flint Corn mixed make a better ration.

### Manchu. (Northern Grown)

One of the most popular varieties. Matures in 100 to 105 days and grows from 36 to 48 inches tall. Manchu is recommended by the Minnesota, Iowa and Wisconsin Experiment Stations as one of the best all around varieties for northern sections, it matures about the same time as Minnesota No. 13 corn for silage and yields well. In Southern Minnesota and Northern Iowa it gives the best yield of seed.

### Wisconsin Pedigree or Early Black Soy Beans (Northern Wisconsin Grown).

The leading extra early variety, improved and recommended by the Wisconsin and Minnesota Experiment Stations. There are late southern grown varieties of black Soy Beans which should not be confused with the Wisconsin Early Black. Be sure to get the genuine extra early variety. They grow from 18 to 30 inches high and mature in 65 to 75 days. They are one of the best yielders of beans and best suited for hogging down.

### Ito San. (Northern Grown).

An early variety maturing two weeks after Early Black. It grows 28 to 33 inches in height, has fine stems but is of erect growth. A fine variety to sow with corn for silage.

### Soy Bean Folder.

To those who are interested will be sent on request a special folder on Soy Beans which tells of the profitable uses to which this valuable variety may be put. It also gives cultivation and suggestions for harvesting.



Single Plant of Soy Bean, Showing Prolific Yield of Leaves and Pods.

## TIMOTHY SEED.

Timothy is the best known, most extensively sown and one of the most profitable grasses grown in this country. Having a large bulk of stems, with few leaves, the hay wastes little in transportation. The grass stands up well, the hay is easily cured and heavy for its bulk. Timothy is very easily established, the seed is inexpensive, and easily sown. It starts rapidly and often yields its best crop the year after sowing. It is extremely hardy, enduring extremes of heat and cold. It does best on moist, clay soils.

**Characteristics.** This grass has shallow, fibrous roots, growing in stools and never forming a compact sod. Timothy increases by multiplication of bulbs, just as some onions do. These bulbs, at the base of the stalk, store food for future plant growth. As the plant ripens, nourishment is stored in these bulbs as well as in the seeds. If Timothy is cut too early, the bulbs are weakened and the stand decreases. These bulbs also increase and store up nourishment in the Fall while the aftermath is growing; therefore it is likely to injure the meadow seriously if it is pastured in the Fall. It should never be pastured unless the aftermath is unusually heavy or the meadow is greatly improved by a dressing of stable manure or other fertilizer. The latter should contain a large amount of nitrogen. Clovers grow well with Timothy and aid it by supplying nitrogen. Medium Red Clover makes a good combination with it and together they form the standard crop for mowing and pasture lands on the majority of farms in the northern and middle states. For a mixture of Timothy and Alsike, see below. Timothy is useful for seeding mountain pastures on ranges in moist areas. It is not suited for permanent pasture as it will run out in the course of a few years. It is, however, well adapted to early Spring grazing as it starts up quickly in the Spring before Blue Grass. The largest crops of hay are raised on rich land. It is not suited for light, sandy soils so well as other grasses.

due to a wet Fall. Timothy rapidly exhausts the soil nitrogen and so the meadows are greatly improved by a dressing of stable manure or other fertilizer. The latter should contain a large amount of nitrogen. Clovers grow well with Timothy and aid it by supplying nitrogen. Medium Red Clover makes a good combination with it and together they form the standard crop for mowing and pasture lands on the majority of farms in the northern and middle states. For a mixture of Timothy and Alsike, see below. Timothy is useful for seeding mountain pastures on ranges in moist areas. It is not suited for permanent pasture as it will run out in the course of a few years. It is, however, well adapted to early Spring grazing as it starts up quickly in the Spring before Blue Grass. The largest crops of hay are raised on rich land. It is not suited for light, sandy soils so well as other grasses.

**Seed Selection.** The most important point in the growing of Timothy is the selection of good seed. Poor seed, besides containing weed seed, will not all grow. That which does germinate is weak and produces few stalks and seed heads. Only ten pounds Northrup, King & Co.'s "Sterling" Brand Timothy required to the acre when sown alone.

### ALSIKE CLOVER and TIMOTHY MIXED.

Where Alsike Clover and Timothy are grown together, and the seed is saved therefrom, it is impossible, in cleaning, to make a complete separation of the two.

On this account we purchase the seed for less money and we can sell it for less than would be the case if a perfect separation could be made.

Those desiring to sow Alsike and Timothy together can save considerable money by buying the seed of these two varieties together as originally harvested.

The Minnesota Experiment Station recommends using Alsike in all Timothy and Medium Red Clover mixtures. The Alsike tends to increase the forage crop and in addition will replace the Red Clover as the latter begins to die out, since the Alsike is a hardy perennial and does not easily winter kill. Alsike and Timothy hay is much richer in feeding value than Timothy alone and will flourish on soils too moist for clover. Alsike is suitable for either hay or pasture. It is finer and more leafy than Medium Red Clover and cattle prefer it. Sow 12 to 15 lbs. of the mixture per acre.

## GRASSES

### BROMUS INERMIS. (Awnless Brome Grass.)

This is a native of the Russian Steppes and thus is suited to a cold climate and dry soil. It is strongly recommended by the Kansas, Nebraska and North Dakota Experiment Stations. It is good for pasture, and in some places for meadow—where the conditions are favorable. Brome Grass makes a dense growth of leaves which start down close to the ground. Animals like it well for pasture. Sheep and cattle like it the best of any grass. Brome Grass thickens up rapidly by underground roots or stems. A thin stand thus improves quickly. It forms a dense sod six to eight inches thick, thus binding the soil together and preventing it from being wind blown. It is one of the deepest rooted of cultivated grasses. The stems grow erect, attaining a height of four feet or more.

It is drought defying, frost resisting. Yields enormous crops of splendid hay. It adapts itself to almost every condition of soil and climate and to any use to which grass may be put, equaling in quality and rivaling in yield almost any other grass. It starts from two to three weeks earlier in the Spring than native prairie grass and it keeps green in the Autumn longer than any of the useful grasses grown in the West. No amount of cold seems to be able to kill it. It bears up well under hot summer suns. It will grow under conditions that are very dry, and it can also stand being covered with water, not deep of course, for one or two weeks in the early Spring. It is about equally nutritious with Timothy. To the country west of the Minnesota border it is probably the greatest boon that has come to it since buffalo grass began to grow. The worth of this grass to the Dakotas and Minnesota is beyond all estimate.

### WESTERN RYE GRASS. (*Agropyrum Tenerum*.)

Sometimes called Slender Wheat Grass, the famous bunch grass of the Canadian Northwest.

It affords excellent pasturage and provides large quantities of hay, but if wanted for hay, should be cut early, as it is relished better by stock. It thrives on all soils, but is peculiarly adapted to prairie soils. It gives good returns on land quite strongly impregnated with alkali and fits it so that grain may be grown successfully.

The seed being quite heavy, may be sown with any ordinary grain seeder. When sown alone as is the common practice, the seed should be put in from 1 to 3 inches deep according to soil and season, 15 pounds to the acre. If with *Bromus Inermis*, 7½ lbs. of each.

### CANADIAN BLUE GRASS. (*Poa Compressa*.)

Resembles somewhat the Kentucky Blue Grass, but is shorter and more slender. It is grown very extensively in Canada and some parts of the United States. It will thrive even on hard clay soils, where there is not quite enough lime and fertility for Kentucky Blue Grass. It holds its color and freshness until snow comes. Canadian Blue Grass does not thrive when planted with Clover. Red Top and Orchard Grass are the best for mixing with it to grow on inferior soils. On good land it becomes tall enough for hay and as it shrinks very little in drying, the hay is heavy for its bulk. One to two feet high. Sow 30 lbs. of seed to the acre.

### KENTUCKY BLUE GRASS. (*Poa Pratensis*.)

This makes the best, sweetest and most nutritious pasture for all stock. It is the first to start up in the Spring and remains green until snow flies in the Fall. It is very hardy and is uninjured by cold or dry weather, hot sun or tramping of hoofs. The roots are so thick and stout that they form a tough sod. Blue Grass requires about two years to get well started and for that reason it is often sown in mixture with other grasses. It will do well on almost any land. Sometimes called "June Grass."

Kentucky Blue Grass does best on well drained, clay soils. It is well adapted to open woodlands. As a pasture it is better liked than any other grass except *Bromus* or Meadow Fescue. It may continue to improve for ten to fifteen years as the plants spread with their underground root stalks. It is best sown with a mixture of Clover, Timothy, Meadow Fescue and *Bromus*, which will later be supplanted by the Blue Grass. It is not advisable to turn animals on to a Blue Grass pasture before the grass is strong. During hot weather do not let them graze it very close. Sow 20 to 25 pounds of "Sterling Brand" seed to the acre when sown alone, 14 lbs. to the bushel.

**Red or Creeping Fescue. (*Festuca Rubra*.)** A creeping-rooted variety forming a close and durable turf and particularly suited for dry, sandy soils. Resists drought and thrives on very poor soils, gravelly banks and exposed hillsides. Valuable both for shady lawns and for golf courses. 30 lbs. to the acre.

### ORCHARD GRASS. (*Dactylis Glomerata*.)

A valuable grass for pasture or hay land, and on account of its earliness is very valuable for a permanent pasture. It furnishes the first green grass in the Spring and until late in the Fall. When closely cropped it grows up very quickly and is ready for grazing again in 10 to 12 days. It will stand drought and is hardy. It grows in tufts, and is therefore best sown with Red Clovers, Rye Grass, etc. It is well suited for shady places, such as orchards and groves. Grows on all kinds of land but does best on deep, rich sandy loam or clay soils. Sow 22 lbs. to the acre.

### RED TOP, SOLID SEED. (*Agrostis Vulgaris*.)

The place for Red Top is on rather moist soil, deficient in lime and fertility. It will grow where the soil is too poor for Timothy and Kentucky Blue Grass. It is a good variety to sow with Timothy and Clover for meadow or pasture and is more permanent than either of the other two. It should be fed close, for if it is allowed to grow up to seed, the cattle dislike it. On good soil it grows about two feet high; on poor, gravelly land about half that height. It has been grown successfully even on alkali land where other grasses failed. Red Top, commonly known as Herd's Grass, should be extensively grown, especially with other grasses.

Red Top has interlacing, thick roots which make a firm sward not likely to suffer injury from the hoofs of animals. It stands the effect of drought better than Timothy. It is more permanent if it is grazed off and not allowed to go to seed. For the best quality of hay, it should be cut when in full flower. It is more easily cured than almost any other grass.

As a hay crop, Red Top is next to Timothy in importance among grasses in this country. It grows two feet or more high and yields one to two tons per acre. It increases in thickness for several years after sowing and is one of the most permanent of cultivated grasses. Red Top weighs 14 pounds to the bushel. Only 10 pounds of "Sterling" Brand required to the acre.

**Creeping Bent Grass. (*Agrostis Stolonifera*.)** Distinctive on account of its compact, creeping, rooting stems. Of rapid growth and spreading habit, forming a strong, durable turf. Good for lawns and putting greens because of its fine texture. If sown alone, use 50 lbs. to the acre. We do not expect to have any seed of this variety to offer this season.

### Perennial Rye Grass American Grown. (*Lolium Perenne*.)

This is becoming well known in this country as a valuable pasture grass which will bear frequent close cropping. Produces an abundance of foliage, which remains bright and green during the season. The hay is relished by all kinds of stock. It will grow well on almost any land but does better on such land as will produce a good corn crop. The plants start early, flower early and repeatedly during the growing season. The leaves are abundant and the whole plant is nutritious.

**Italian Rye Grass. (*Lolium Italicum*.)** This is like the Perennial Rye Grass, valuable for pasture and also for hay. It thrives on rich, moist land, where from three to four cuttings may be made in a season. It grows very quickly and will stand close pasturing. About 24 lbs. of seed required to the acre.

### Meadow Fescue or English Blue Grass. (*Festuca Pratensis*.)

Especially suited for permanent pasture and is also fine for hay. Grows two to three feet high but not in tufts like Orchard Grass. The hay is very nutritious and cattle thrive on it whether it is dry or green. Succeeds even in poor soil, and as the roots penetrate deep, from 12 to 15 inches, it takes extremely dry weather to affect it. As a fertilizer it has valuable properties. It will endure severe freezing and its use is becoming more widespread each year. 24 lbs. are sown to the acre.





A Beautiful, Smooth, Velvety, Green Lawn is Certain Through Sowing  
**Northrup, King & Co.'s "Sterling" Lawn Grass Seed**

See next page for bag and carton sizes.

ANALYZED AS TO PURITY

:-

TESTED AS TO GERMINATION



**Northrup, King & Co.'s Sterling.**

A smooth, velvety lawn surrounding a house adds not only to the value, but enhances the enjoyment of every home, whether it be in city, town or country. When properly made, a lawn is as satisfactory as any investment a home owner can make. A lawn may be made in two ways, by sodding or by sowing seed. Sodding is not only very expensive, but unsatisfactory as well. Sodds are ordinarily taken from a pasture or along the roadside and almost invariably contain weed seeds and coarse, tufty grasses which appear after the lawn is made. Seeding is not only more economical but is attended with better results.

The most important thing to consider in selecting seed for lawn grass is to obtain a proper mixture of several varieties, for two reasons. First, each variety is at its best during a certain part of the season. By properly choosing early, medium and late grasses, a smooth, even, green lawn is assured from early Spring to late Autumn. Second, a given area can support only so many grass plants of one kind for they all absorb the same sort of food, but if several varieties are sown, the same area will support many more plants, as different sorts live on various elements in the soil. This will give a much thicker and more luxuriant turf all over the lawn.

With these facts in mind our Sterling Lawn Grass Seed is scientifically combined. Our experience of many years has given us an intimate knowledge of grasses, their habits and requirements. In our Sterling Lawn Seed are included the best varieties—pure, clean and free from foul seed.

Our Sterling Lawn Seed is very quick in growth and is ready for mowing in from six to eight weeks from the time the seed is sown.

From early Spring until late in the Fall, lawns sown with our Sterling Lawn Seed remain green and fresh, for the reason, that this mixture includes quick growing varieties which are at their best soon after the frost is out of the ground, others that mature and flourish in Midsummer, and still others that are greenest and sturdiest in Autumn. For each of these seasons there are several different varieties living on different elements in the soil, so that one is certain always to have a satisfactory carpet of green wherever our Sterling Lawn Seed is sown, under favorable conditions.

Strangers visiting Minneapolis, frequently comment upon the beauty of its lawns, both in the public parks and about the homes of the residents. Our Lawn Grass Seed is used very extensively, not only in our own city, but in all parts of the United States, and the demand for it is increasing every year. Our Lawn Seed is used on golf courses, tennis courts, croquet lawns, athletic fields, in parks, cemeteries and private grounds, with unvarying success. A brand of Lawn Grass Seed, such as our Sterling Mixture, which gives perfect satisfaction for these requirements is bound to insure a fine, beautiful, velvety turf around any well cared for residence.

Not only is Sterling Lawn Seed suitable for making new lawns, but it is equally valuable for quickly renewing old, worn-out areas.

Our Sterling Lawn Seed is free from chaff, being especially re-cleaned and therefore less bulky than seed not so well prepared. A pound of Sterling Lawn Seed will produce a good lawn on a much larger area than will a pound of the cheaper mixtures. In making a new lawn one pound of Sterling Lawn Seed will sow 350 square feet.

**Northrup, King & Co.'s Shady Place Mixture.**



On almost every lawn there are shady places where difficulty is experienced in getting grass to grow. These bare spots are very unsightly and disfigure the lawn. In such places proper seeding may be all that is required. In this mixture we have combined fine, dwarf growing, ever-green varieties which do well in sheltered or shaded spots. Some varieties of grass require more sun than others, therefore if the kinds which need the least sun are selected, those sorts when sown in shady places will thrive and make a good appearance. Frequently a shady lawn, which is at the same time insufficiently drained, becomes affected with moss and coarse, bog grasses. In such cases an application of slacked lime at the rate of forty to fifty pounds to each thousand square feet is an excellent remedy; but the moss should be first removed with a sharp rake. When this is done, sow our Shady Place Lawn Mixture, which will bring greenness to the bare spots and restore the beauty to your lawn. Of course, very densely shaded places are quite hopeless and no variety of grass can be made to flourish under such conditions.

**Nurse Crops For Lawns.**

Kentucky Blue Grass is the basis of all good grass seed mixtures and the one which will eventually occupy the land. It is very slow to germinate, frequently lying in the soil 5 to 6 weeks before sprouting. On this account we advise the general use of nurse crops. For this purpose we recommend oats, medium red clover and winter rye, to be used according to the suggestions below. For the fall nurse crop use winter rye.

Nurse crops are especially desirable when a lawn is sown very late in the Spring and there is danger that the hot sun will dry up the soil and burn the grass seedlings before they become well started. Under these conditions either oats or medium red clover are useful. Oats produce shade more quickly, but medium red clover is more attractive and also enriches the soil. Medium red clover is also valuable for improving vacant lots, boulevards, or wherever a good effect is desired at slight expense.



Northrup, King & Co.'s Putting Green Mixture Is Composed Entirely of Dwarf Growing, Evergreen Grasses Which Make a Firm, Durable Turf.

### Northrup, King & Co.'s Terrace Mixture.

The secret of a fine sward for terraces lies in obtaining grasses which root deeply and spread so as to make a heavy mat of sod. To keep such sod in first-class condition, the grass should not be cut too often nor too closely. Give it a chance to grow strong and tough. Let the food which the grass blades get from the air, dew and rain, work down to strengthen the roots.

This mixture is suited for sowing on terraces, embankments and hillsides, preventing heavy rains from washing them out, and withstanding drought and exposure; produces at the same time a velvety, luxuriant turf of especially fine appearance.

To keep the terrace looking well, it is important that the grass plants should always be healthy and vigorous. Sterling Garden and Lawn Fertilizers, Bone Meal and Sheep Manure are splendid for the purpose. See page 95 for complete information. Some years ago, at the time the Minneapolis Industrial Exposition Building was opened, the grounds were terraced to the street. The management was anxious to have the grounds look as well as possible, but was in a quandary as to the terrace. We supplied them with our Terrace Mixture six weeks before the Exposition opened, with the result that at the end of that time the terraces looked as though they had been established for several years.

### Lawn Restoring Grass Seed.

In the Spring of the year there are, in almost every lawn, thin or bare spots which were caused by ice or exposure during the winter months. These may be very quickly renewed by an application of this mixture which is made up of those varieties of seeds which will rapidly grow

and occupy ground before weeds obtain a foothold. A spotted lawn may thus be made uniform and beautiful at slight expense.

### Golf Mixtures

On Putting Green and Fair Green golf mixtures are the result of our long experience with fancy and staple grasses. Each mixture is made from the best quality of domestic and imported seeds, each chosen for its particularly valuable characteristics. The Putting Green Mixture is also suitable for croquet or tennis courts or any area requiring a smooth durable sward of fine texture.

### Glenwood Park Mixture

This is one of our standard mixtures and supplies the demand for lower price seed of generally satisfactory quality. It is composed of lower price grasses than those in our Sterling Mixture, but makes a very good looking and permanent lawn. The seed is clean and of good germination. Produces a quick growth of rich green color and the variety of grasses used provides for good appearance of the lawn throughout the summer.

**Sterling Garden and Lawn Fertilizer.** An excellent lawn dressing containing the proper plant food to stimulate the grass into luxuriant growth. This is especially valuable in early Spring to fertilize the bare places before sowing seed. Two or three applications in a season will keep grass in flourishing condition. See page 96 for complete directions for its use.

### Grass Seed Required. Quantity For New Lawns.

1 lb. for 350 square feet. 3 lbs. for 1050 feet. 5 lbs. for 1750 square feet.  
lbs. for 3500 square feet. 100 to 125 lbs. per acre.

These Three Packages May Be Obtained  
In Quantity As Follows:

#### STERLING LAWN GRASS SEED

Bags white cotton, 3 lb., 5 lb., 10 lb.,  
25 lb., 50 lb., 100 lb.

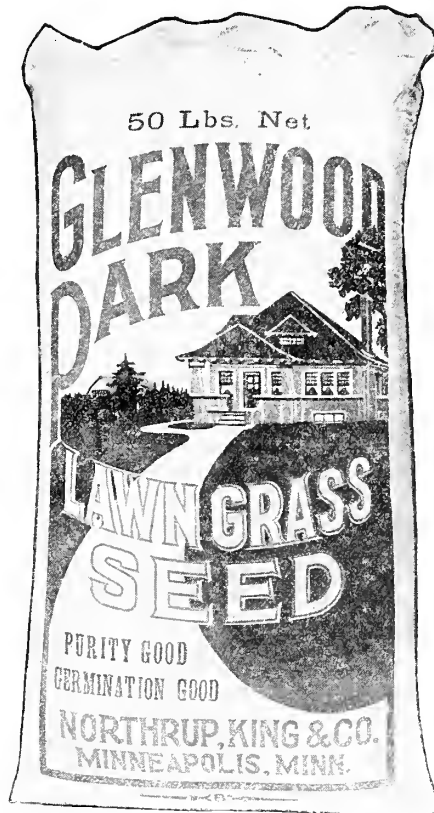
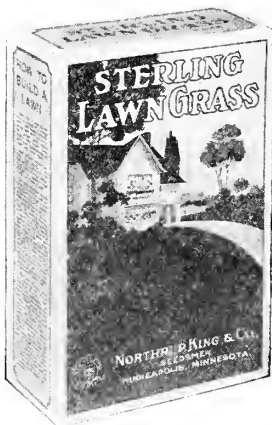
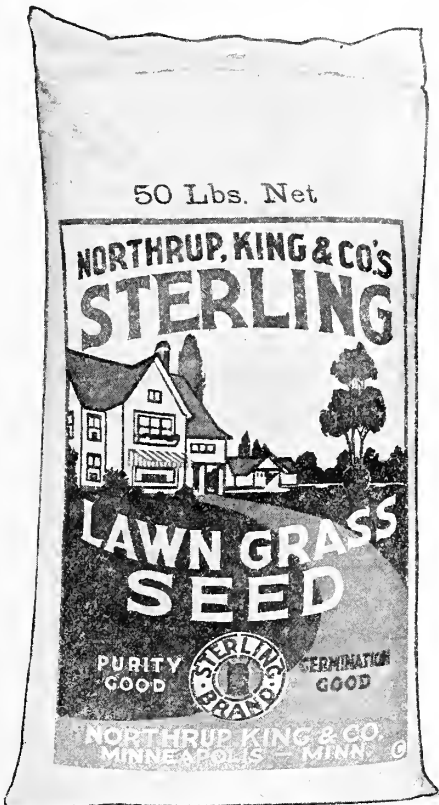
Cartons each 1 lb.

Lithographed in seven colors.

Packed in two sizes of cases, 25 and 50.

#### GLENWOOD PARK LAWN GRASS

Sold only in white cotton bags,  
3 lb., 5 lb., 10 lb., 25 lb., 50 lb., 100 lb.



# MILLET



**German Millet.** (True Southern Grown Seed.) In the North, Millet is sown almost altogether for hay, and for that purpose Southern grown seed is much the best. It grows taller than does that from Northern seed, and that means more hay. It is finer than that from Northern seed, and that means better hay. In fact, it is our judgment, based on an experience of many years, that a farmer had better, from the standpoint of profit alone, pay \$2.50 a bushel for true Southern grown German Millet than to sow the best Northern Millet as a gift. Millet seed produced in the North, even from Southern seed, becomes what we call Common Millet. Not only does the plant change in character becoming coarser and much more dwarf, but the seed itself shows a change, and is readily distinguished by those experienced in handling it.

We wish to say that any Millet seed offered and shipped by us as German Millet is true Southern Grown Seed, and that only.

German Millet is very sweet, palatable, and when fed to dairy cows produces a large amount of milk. On good rich soil it grows four to five feet high. It is very tender if cut at the right stage, which is when it is in full bloom. About three-fourths of a bushel of seed is sown to the acre; 48 lbs. per bu. A good yield is from three to five tons of hay to the acre.



**Common or Northern Millet.** As stated before, Common Millet does not yield so much hay nor so good hay as the German (Southern Seed). It is usually much cheaper than true German. Grows usually from two and one-half to four feet high and makes excellent hay. Sow about three-fourths of a bushel to the acre. We have in store this season an especially fine lot of Common Millet which is as nearly perfect in quality as Common Millet can be. This we are offering under our Sterling Brand.



**Hungarian.** (Dark Seed.) Often called Hungarian Grass. Many regard this as being better even than German Millet as it is about one week earlier and requires less moisture. The hay is fine and of excellent feeding value.

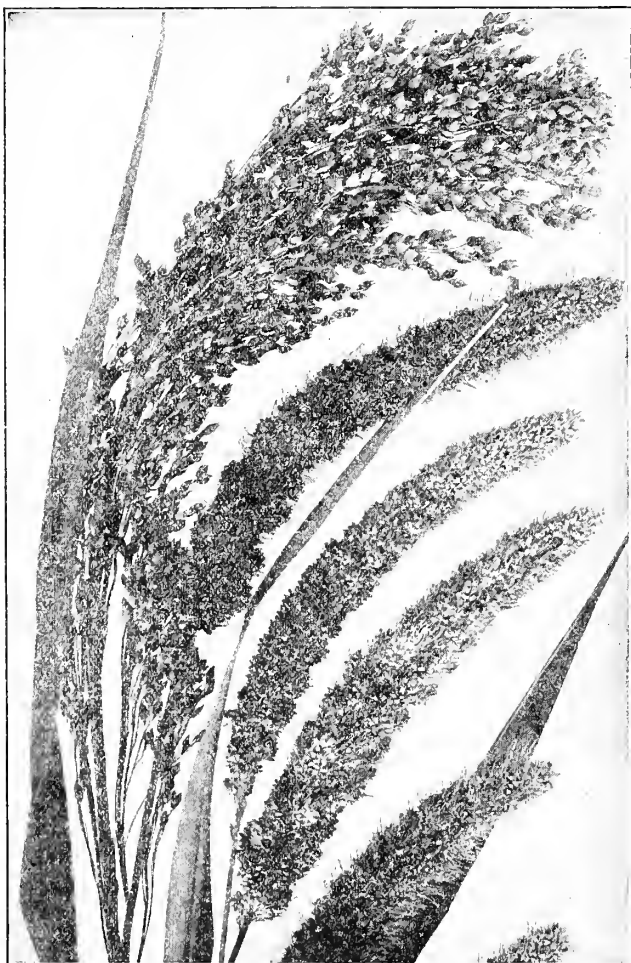
It is especially valuable on account of requiring such a short season to make a fine crop of most excellent hay. For this reason it is much used as a catch crop. It can be sown as late as the 4th of July with good results, in ordinary seasons. It is much used for following such crops as early potatoes and barley for a crop of hay, thus giving two crops on the same land in one year. Also grown as



A Plot of German Millet.

Raised from True Southern Grown Seed. Note the Heavy Growth.

a green manuring crop to turn under, adding humus or fertility for future crops. Hungarian Millet does not grow so coarse as some other varieties, but still yields quite heavily, from two to four tons of hay to the acre being an ordinary crop. Hay is quite leafy, of very fine quality.



Broom Corn and Kursk Millet Seed Heads.



**Siberian Millet.** A fine variety from Russia, earlier than either German Millet or Hungarian, and consequently very valuable for the North and yields remarkably. It is extremely hardy, withstanding drought wonderfully and is about two weeks earlier than the German Millet. The leaves are very tender, making it excellent for hay. The South Dakota Experiment Station pronounces it "the most promising variety yet tested." The plant stools to a remarkable degree, as many as thirty to forty stalks have been grown from one seed, and is not subject to rust.

**Kursk Millet.** This variety was first introduced to the farmers of the United States from Kursk, Russia, in 1898, after which extensive experiments were conducted at both South Dakota Stations, demonstrating the superiority of this new variety. Results since then have been more than gratifying. It ranks very high both as a hay and seed producer, and in dry years the weight and quality of hay have been far superior to other sorts. In favorable seasons, so much difference is not apparent, but it has always been in favor of Kursk Millet. While on moist lands, the German or other southern varieties are recommended, for dry sections we urge the planting of Kursk Millet, knowing that it will produce the results claimed for it.

**Japanese Millet.** Improperly called "Billion Dollar Grass." Entirely distinct from all other Millets. It grows from 6 to 9 feet high, stands up remarkably and yields enormous crops. When cured it makes good hay and in quality is superior to corn fodder. It is relished by all kinds of stock. It may be sown broadcast at the rate of 15 lbs. an acre, but it is better to sow in drills 12 to 18 inches apart, using 10 to 12 lbs. to the acre. Cultivate until the plant is 18 inches high, when its rapid growth will smother all weeds. It does best on low, moist ground.

**Hog or Broom Corn Millet.** This is grown for the same purpose for which other Millets are sown, and makes fair hay if cut very young. It, however, yields enormously of seed, even 60 to 70 bushels to the acre, and this seed is very advantageously used for fattening swine and other stock, and is of special value for this purpose in sections where corn cannot be safely or cheaply grown. Seed also makes very fine feed for poultry and young chicks. It is very similar to the Early Fortune Millet, except that the seed is yellowish white in color. It will mature in about two months from sowing the seed.

**Early Fortune Millet.** A most promising variety, of which astonishing yields are reported. It is very early, and is claimed to be rust proof, and that chinch bugs will not eat the plant. The seed is very beautiful and distinguished in appearance and is of a beautiful red color. The seed is two or three times the size of German Millet. This variety heads in from 25 to 35 days. It gives a large yield both of seed and fodder. It can be fed to horses and other stock without injury, even when cut so late that the seed has formed. The seeds are smooth, the heads are branching, and in other respects this variety is similar to Hog Millet except for the color of the seed. For prices ask your own dealer, who handles our brands, for latest values.

**White Wonder Millet.** Introduced here from China and has proven as hardy as the other millets. A very heavy producer of excellent fodder. Heads are extremely large being from eight to eighteen inches in length. On account of its earliness, large yields of both grain and fodder and the prolific growth which kills weeds, it has become one of the most popular of the millets.



## STERLING SEED CORN

When Northrup, Braslan, Goodwin Company, the predecessors of Northrup, King & Co., started business in Minneapolis in 1884, two of the partners were from New England. Conditions were so similar here to those in their home state that the New England Flints were catalogued and recommended by them. These varieties—King Phillip, Longfellow and Mercer, proved adaptable and helped move the corn belt farther north on account of the wide distribution this company gave them.

The influence of Northrup, King & Co. in promoting profitable corn growing in the Northwest is recognized by authorities. Montana Bulletin No. 107 on corn credits either Northrup, Braslan, Goodwin Co., or Northrup, King & Co., with the introduction of nearly half of the standard corn varieties of the Northwest.

### Production Of Sterling Seed Corn

Sterling Seed Corn is produced from our own special seed stocks.

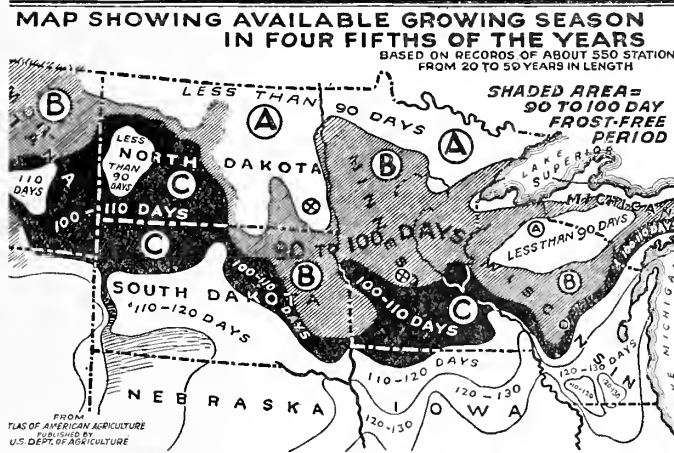
Production is concentrated around certain growing stations, where experience has shown a high quality crop can be grown each year, regardless of drought, wet seasons or frost. One of these growing stations is located about 75 miles south of Minneapolis, in the 100 to 110-day zone (see map below) where the later varieties requiring 100 to 110 days to mature are grown. Two stations are located about the same distance northwest of Minneapolis, in the 90 to 100-day zone, where varieties requiring 90 to 100 days to mature are grown. At two other stations north of Minneapolis, the extra early dent varieties, and many of the flint varieties are grown.

Fields are grouped according to varieties and carefully isolated from other corn.

Growers harvest the seed ears during September or early October and store them until shipping time, in special wire seed corn cribs. These cribs are very narrow with wire sides and arranged so the air can circulate through the center, providing the maximum of drying afforded by outside conditions.

Delivery is made to us at the growing stations during October, where loading into cars is done by our men with special equipment for rapidly handling seed corn ears. The growers deliver only the choice ears from the crop, which must be of a high quality. Corn not meeting this standard is rejected.

The fact that Sterling Seed Corn is grown from Northrup, King & Co.'s own seed stocks is more significant to planters than it may seem on first thought. It means that each individual variety of Sterling Seed Corn is uniform in maturity and type, year after year. It means that once a Sterling variety has been proven adapted to conditions in any particular locality the purchaser can depend upon every bushel of that variety he buys later being just the same.



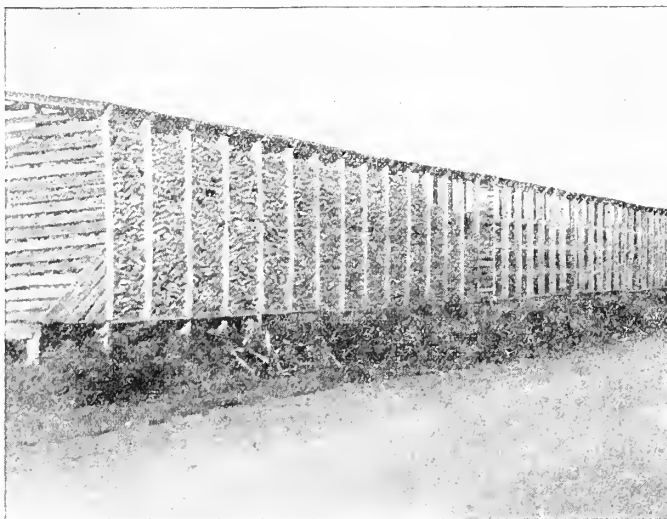
We believe it is possible for a seedsman to know that the corn he sells you is of proper maturity only when his seed is grown from his own seed stocks, under his own supervision. Northrup, King & Co. stands almost alone in its careful policy of growing all Sterling Seed Corn from its own seed stocks.

### Exhaustive In-Breeding Work Now Being Done To Assure Uniform Quality

Northrup, King & Co.'s Corn Breeding and trial grounds cover several acres. Breeding and production of Sterling Seed Corn is under the personal direction of our two corn specialists whose entire time for years has been devoted to this work. The general plan of our breeding begins with selecting the most desirable plants from a special corn field planted with the best available seed. This selection is made just after tassels appear, and paper bags are placed over the tassels and ear shoots of the selected plants before the silk appears. When the pollen on the tassel is ripe, the bags are carefully removed and pollen is transferred from the tassel to the silk of the same plant, the bag being replaced over the silk to keep out any other pollen. This is called self fertilization.

Normally, pollen blows from the tassel of one corn plant to the silk of another, causing cross fertilization. The object of self fertilization is to exclude pollen from other plants, confining the inheritance of the selected plant to that particular individual. These selected, self-fertilized ears are harvested when ripe and each is given a number.

The next year a separate row is planted from each ear. Each row is a family of plants all from one mother ear. The plants in each of these ear rows are studied and notes taken during the growing season as to their vigor, color, height of growth, lodging, etc. At harvest time the row is harvested and the



A Wire Side Crib Used For Storage Before Shipping

yield of each row weighed. At pollenizing time, however, five of the best plants in each row are capped with bags and self fertilized as was done the year before. The ears from these plants are planted in ear rows again the next year. This process is continued for several years until the yielding ability and other characteristics of each of these families is well known and recorded.

Investigators have found that normal corn is composed of a certain number of fundamental strains. Natural cross fertilization which takes place in an ordinary corn field results in a very complex combination of these different strains in the inheritance of each individual plant. The inbreeding process just described tends to isolate these fundamental strains.

When we have isolated fundamental strains, or pure lines as they are called, we have what farmers have always sought, namely, uniformity. When a row is planted from an ear which is reduced to a pure line every plant in that row will grow exactly alike, and every ear will have the same characteristics. The various rows planted with other ears will differ from each other in some characteristic. Some of these pure lines are so weak they will not reproduce themselves and are dropped by natural elimination. Other lines show a high percentage of smutted plants, still others an inherited weakness of stalk. Some show consistently large ears and will yield several times as much as weak rows which produce only nubbins.

It is common knowledge that a prize ear of normal corn will not reproduce itself consistently but a pure line like those secured from the kind of breeding described above will reproduce the same type of ear and plant each year.



C. A. BUSH, In Charge of Breeding and Production of Sterling Seed Corn.  
Hand Pollenating Corn Plants.

## Sterling Seed Corn==(Continued)



Northrup, King & Co.'s Breeding Grounds at Seeding Time  
The White Marks Are Stake Labels For Rows.

Good and bad characteristics of many kinds are revealed which have a bearing on yield in a normal corn field. After the characteristics of each pure line are known and yields have been checked for years, the good pure lines can be crossed into combinations which will give the highest yields. Many combinations must first be tried and the yields tested in plots before the best combination can be found.

Nearly every experiment station has adopted the inbreeding method for seed corn improvement.

It will be a year or two before the complete benefits of our inbreeding work will be available to northwestern planters. In the meantime we continue to grow, cure and distribute the best seed corn that skill, honest effort and large facilities can produce.



Northrup, King & Co.'s Breeding Grounds at Pollenizing Time

### Curing and Drying

Sterling Seed Corn is fire dried during October and November to approximately 12% moisture. By fire drying is meant driving off the excess moisture within a comparatively short time by the use of warm air.

Nearly all seed corn troubles are due to too much moisture. If seed corn is dried to 12% before cold weather most of these troubles disappear. If corn containing 20% moisture is exposed to temperatures between 15 and 20 degrees the germs are killed. Corn containing 16% to 18% moisture will often mold and heat in the spring when the weather gets warm. Either mold or heat kills corn germs. Besides these common seed corn troubles seed corn germs lose their vigor if excess moisture is allowed to remain in the corn during the winter. Seed with germs weakened this way will show sprouts in an artificial germination test but do not have sufficient vigor to make a plant in the field when conditions are unfavorable.

The reason for this loss of vigor is that seeds carry on a sort of breathing called respiration. This respiration is rapid with much moisture present and requires energy which is taken from the germ, thereby weakening it. If thoroughly dry, respiration is held to the lowest possible point and the vigor of the germ is conserved. This principle is important in corn yields because plants weak at the start usually remain weak and produce nubbins.

Northrup, King & Co.'s corn curing system is radically different from any other system in use in the Northwest. As soon as the ears of ear corn reach our Minneapolis plant they are unloaded directly into a hopper on the basement floor of our corn warehouse. An elevator carries the ears from the hopper to either the first or second floor of the corn house and delivers them into drying racks.

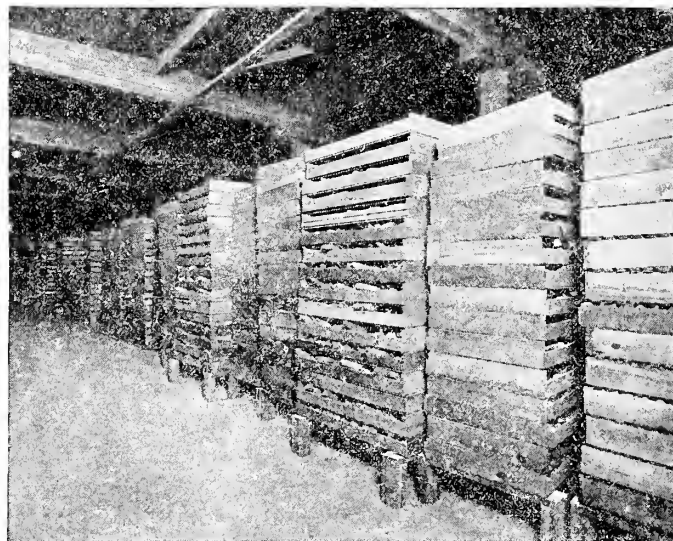
The racks are made with slat bottoms and with openings at each end to permit free circulation of air. When filled with ears of seed corn the racks are piled, fifteen high, on a skid. Then with a lift truck these piles are hauled to and from the drying rooms without further repiling and loss of time.

At each end of our seed corn warehouse is a dry room unit consisting of two floors and basement. The first and second floors are made grate style, with one inch opening between each board placed edgewise. The first and second floor drying rooms are filled with piles (15 high) of drying racks containing seed corn ears. Sufficient space is allowed between piles to provide complete air circulation.

Large fans and furnaces in the basement draw in and heat 8,000 cubic feet of air each minute. This air then passes up through the perforated floor and open-bottom drying racks, absorbing the moisture from the ears of corn and passing off through ventilators in the roof. Within 3 days the moisture of the 3,000 bushels of corn in each room is reduced from 20% to 12%, a maximum temperature of 80 degrees being used.

After drying, the corn is again hand-sorted just before shelling. Each ear is carefully examined as it passes the sorters, on a slow-moving belt. Any which do not come up to the Sterling Standard are removed.

The sorting table discharges directly into the sheller, which has a capacity of 2,000 bushels per day. The shelled corn is carried on an endless belt to the main building and elevated



Corn in Drying Racks Ready for the Dry Room

to the cleaners and graders. Here tip and butt kernels are removed and the seed graded to uniform sized kernels. It is then sacked in seamless white cotton bags bearing the Sterling Seed Corn trade-mark and is ready for shipment.

We aim to have all Sterling Seed Corn cured, dried, shelled, sacked and stored away by Thanksgiving time. It is the only method by which dependable germination can be assured year after year.

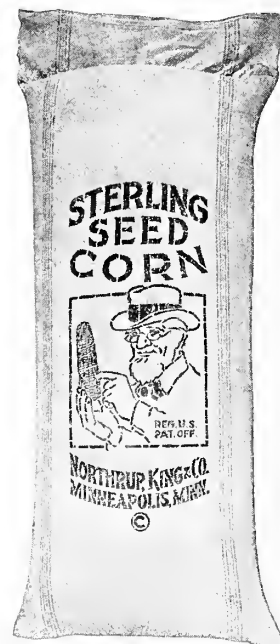
Cheaper seed corn than Sterling is cheaper because it lacks the thorough work put on Sterling Seed Corn. If farmers wanted cheap seed corn, Northrup, King & Co., with its plant equipment and volume, could lower its prices materially by cutting out important processes. But our experience has shown us that farmers want good seed corn, produced as economically as possible.

As Sterling Seed Corn is being sacked, a representative sample is taken which goes to our seed laboratory. Here the moisture content is tested again and germination test is made in electrically controlled germinators.

Each bag of Sterling Seed Corn bears a tag showing county where grown, moisture content, percentage of germination and dates when these tests were made.

### Our Fire Drying Methods Are Approved By Agricultural Stations.

Fire drying in the early fall to a low moisture content as practiced by Northrup, King & Co., is recommended by the Wisconsin, Minnesota, and North Dakota Experiment Stations. As far as we know, Northrup, King & Co. is the only large seed house in the Northwest fire drying all its corn to an average of 12% during October and November. As a result of this process, Sterling Seed Corn has a higher and more vigorous germination, producing a better stand of more vigorous plants in the field, which is an important factor in high yields. Sold only in branded bags, as shown by the accompanying illustration.



## Varieties Of Sterling Seed Corn

There are twenty varieties of Sterling Seed Corn, ranging in maturity from Squaw Flint, which matures far north in Canada, to Silver King, adapted to Southern Minnesota and like sections. The map and chart on pages 79 and 88 can be used to determine the varieties adapted to any particular section. The map shows the Northwestern States divided into three zones according to the number of days of safe corn growing seasons. The third column on the chart shows the number of days required on the average to mature each variety.

Determine from the map in which growing season zone you are located. The varieties which should mature in your zone can be found by consulting the third column of the chart. Areas near the Great Lakes are exceptions on account of cool

summer weather. Varieties about 10 days earlier than indicated by the map should be used there. These figures apply to Sterling varieties only, which are kept true to the types specified by the various State Experiment Stations.

For instance, Minnesota No. 13, coming from Southern Minnesota or Nebraska, is very different in maturity from Sterling Minnesota No. 13, which is the standard Central Minnesota strain—conforming to the standards set by the Minnesota Experiment Station. Yet these late maturing strains are sold in competition with Sterling Minnesota No. 13, and so labeled as to lead the buyer to believe they are the same in maturity.

Always demand Sterling varieties, which are true to type and uniform year after year.

### Areas Where Sterling Varieties Are Adapted

Growing Season Areas	Varieties Adapted
Less than 90 days	<b>For Grain</b> —N. W. Dent, Extra Early Minnesota No. 13, Minnesota No. 23, Mercer, Triumph, Smut Nose, King Phillip, Gehu, N. D. White, and Squaw Flint. <b>For Fodder and Ensilage</b> —Minnesota No. 13, Rustler, Wisconsin No. 8, Longfellow Flint.
90 to 100 days	<b>For Grain</b> —Minnesota No. 13, Rustler, Wisconsin No. 8, Longfellow Flint. <b>For Fodder and Ensilage</b> —Minnesota Ideal, Murdock, Wisconsin No. 12, Wisconsin No. 7.
100 to 110 days	<b>For Grain</b> —Minnesota Ideal, Murdock, Wisconsin No. 12, Wisconsin No. 7, Minnesota No. 13, Rustler, Wisconsin No. 8.
For very short season areas	<b>For Grain</b> —N. D. White Flint, Gehu Flint, Extra Early N. W. Dent, Squaw Flint. <b>For Fodder and Ensilage</b> —N. W. Dent, Mercer Flint, Minnesota No. 13.

#### Northwestern Dent

Its origin is not definitely known but it is supposed to be a cross between a red flint and a yellow dent. For this reason it is classed as a semi-dent.

It matures in 85 to 95 days, grows from 5 to 7 feet high. Kernels are shallow and red with a copper yellow cap. Cob is white. The ear has from 10 to 14 rows and is 7 to 9½ inches long, 5 to 6 inches in circumference with a decided tendency to be tapering.

Northwestern Dent is very leafy with a thin stalk and usually

has suckers, probably a characteristic inherited from its flint parent. These plant characteristics, coupled with its early maturity, have made it the most popular variety for growing in extreme northern sections for bundle feeding. Northwestern is not well adapted for husking since the cob is large and kernels shallow. It is especially well adapted for fodder and bundle feeding throughout northern Wisconsin, Minnesota, North Dakota, and Montana, and will make more growth in cool weather than the dents.

Northwestern requires more fertile soil to give good yields of grain than do Minnesota No. 13 or Rustler.



Northwestern Dent.

#### Extra Early Northwestern Dent

Extra Early Northwestern Dent is an early selection from the standard strain of Northwestern Dent. It is about a week earlier than the Standard Central Minnesota strain, and matures quite consistently through extreme Northern Minnesota, North Dakota, and the higher elevations of Montana. It is especially adapted to the prairie provinces of Canada.

The plants grow from 5 to 7 feet high, with a tendency to sucker, and the corn matures in 80 to 90 days.

Ears are 12 to 14 rows, 5 to 7 inches long. In color this strain tends to have red kernels with a white cap where the standard strain has a yellow cap. It is adapted for husking along both sides of the Canadian border and in high altitudes of mountainous country and for bundle feeding in the northernmost sections where corn is grown.

#### Minnesota No. 13 Yellow Dent

Minnesota No. 13 is thought to be a smooth type selection from the old Pride of the North, the most popular yellow dent in Minnesota before 1897.

Minnesota No. 13 matures in 90 to 100 days, grows 6 to 8 feet high. Kernels are fairly dark yellow, of medium depth. Cob is red.

The ears carry from 14 to 16 rows of kernels and average 7 to 9 inches long, 6 to 7 inches in circumference. While the roughness of the ears varies, the fairly smooth type is considered the most desirable.

Minnesota No. 13 is the most popular yellow dent in Minnesota and is also favored in the northern half of Wisconsin, parts of North Dakota and Montana.

The standard strain is especially adapted for the growing season of Central Minnesota, but is used extensively as a husking crop over a large part of the northwest.



Minnesota No. 13



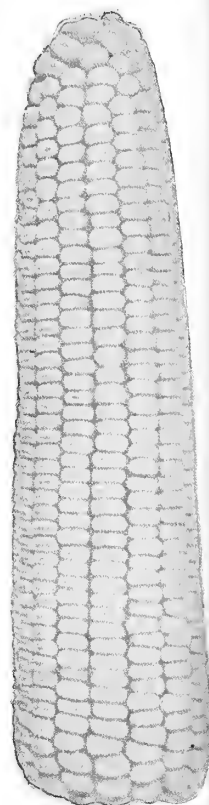
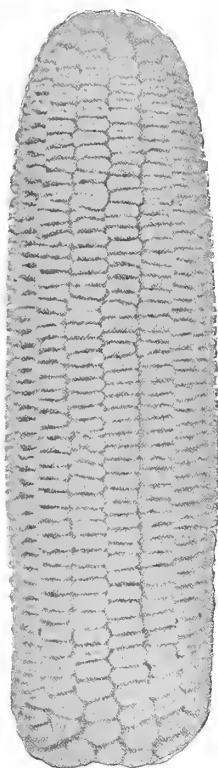
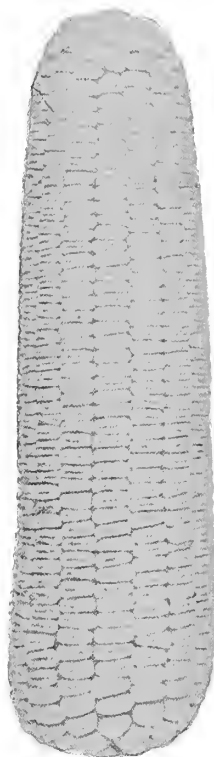
Longfellow Flint

Minnesota Ideal

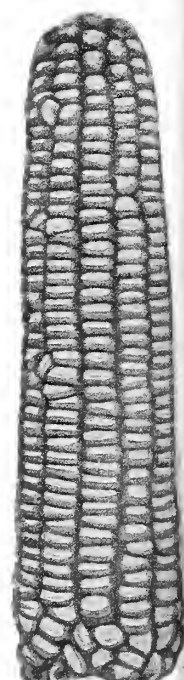
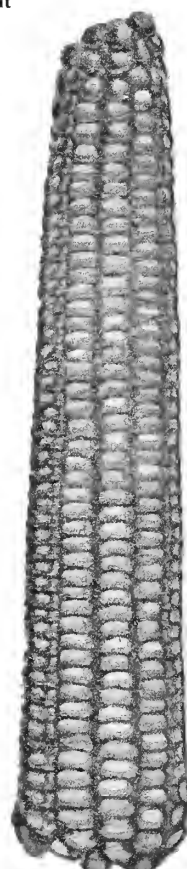
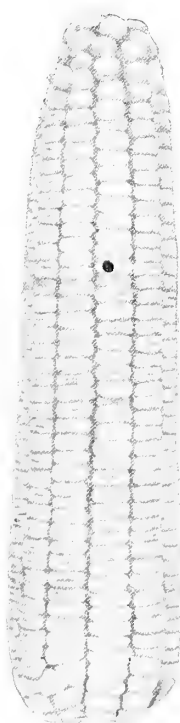
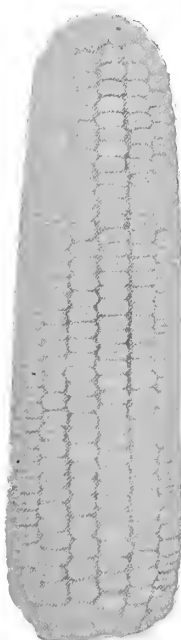
Rustler White Dent

Minnesota No. 13  
(Standard)

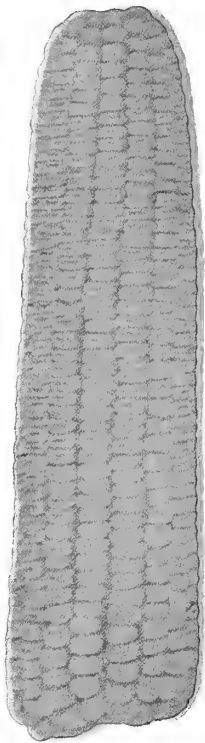
Murdock



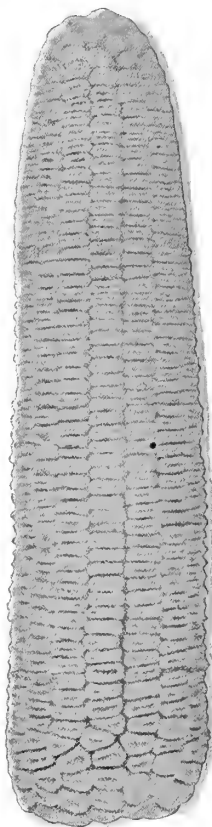
Triumph Flint

Northwestern Dent  
(Standard)Minnesota No. 23  
(White Cap Yellow Dent)Extra Early  
Northwestern DentExtra Early  
Minnesota No. 13

Early Yellow Dent  
Wisconsin No. 8



Golden Glow  
Wisconsin No. 12



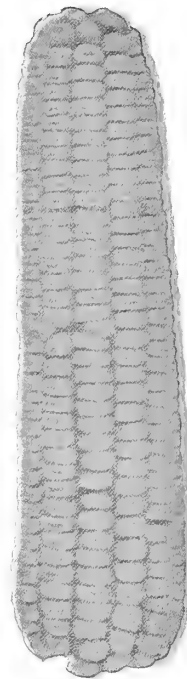
Smut Nose Flint



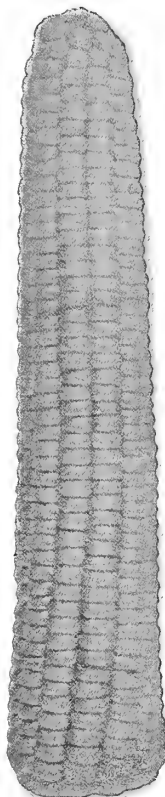
Silver King  
Wisconsin No. 7



Wisconsin No. 25



Mercer Flint



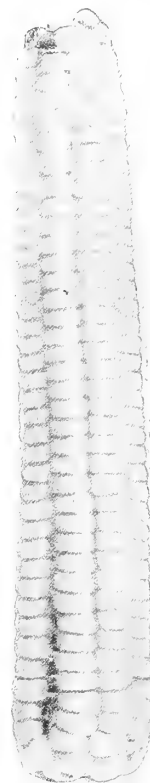
Gehu Flint



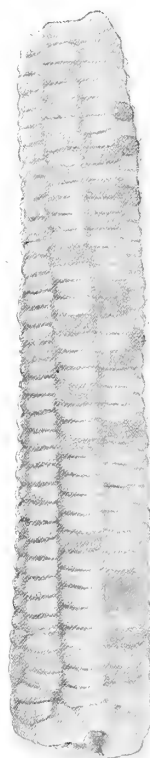
King Philip Flint



North Dakota White Flint



Squaw Flint



### Extra Early Minnesota No. 13 or Moccasin Dent

This is one of the early strains of Minnesota No. 13, and was developed by the International Harvester Company on their experiment farm at Grand Forks, North Dakota.

It meets the demand for a yellow dent in sections farther north where the standard Minnesota No. 13 is too late in maturity, and where Northwestern Dent and Minnesota No. 23 only were available before.

It matures in 85 to 95 days and grows 5 to 7 feet high. Ears are 5 to 7 inches long, and 5 to 7 inches in circumference. Kernels are yellow and cob red, with 12 to 16 rows. Our stocks of Extra Early Minnesota No. 13 are produced so as to retain the early maturing quality of the original strain.

Extra Early Minnesota No. 13 is adapted for husking north of the 90-day line in Minnesota, North Dakota and Montana. It is quite similar to Wisconsin No. 25.

Extra Early Minnesota No. 13 has given the best yields of any of the Yellow dents at the North Dakota Experiment Station and is being recommended by Dr. Walster, Agronomist.

In yield tests at the Crookston substation, this strain gave excellent results.



Early Murdock or Wis. No. 13

### Minnesota Ideal Yellow Dent

Minnesota Ideal was grown as an unnamed variety in south central Minnesota a number of years before 1905, and is claimed to be a large Iowa variety gradually moved north.

It is a large, long-eared variety with a tall stalk, which yields heavily under especially favorable conditions, but is apt to produce too many nubbins if the soil is not extremely fertile.

Ideal matures in 100 to 110 days, grows 7 to 9 feet high. The ears are 8 to 9 inches long, with some considerably longer; circumference, 6 to 7 inches. The ears have 14 to 16 rows of kernels, rather shallow and smooth, with a fairly light yellow color. Cobs are fairly thick.

This variety at one time won a prize, offered by the late J. J. Hill, for the longest ear of corn.

Ideal is adapted, for husking, to the heavier soils of southern Minnesota and other sections having over 100-day growing seasons.

It is admirably adapted for ensilage and fodder farther north, having a much larger plant than Minnesota No. 13, only 10 days later in maturity.

"The combination of field selected, fire dried, and tested seed, sown early on well prepared cloverland, has given an average increase in yield of 22 bushels per acre over the ordinary methods of growing corn." *Wis. Exp. Sta.*

### Early Murdock or Wisconsin No. 13

Murdock has been a standard variety in Iowa, Wisconsin and southern Minnesota for years.

One outstanding feature is its deep kernel for an early corn. When shelled, it looks as though it might have been grown in Missouri.

Murdock matures in 100 to 110 days and grows 7 to 9 feet high. Ears are very rough, fairly short, 6 to 8 inches, but thick cylindrical, with 16 to 20 rows. Kernels are very deep and light yellow. Cob is very small and red.

It is adapted for husking and is rapidly becoming the most popular variety in southern Minnesota and sections with over 100-day seasons where Minnesota No. 13 is considered too early. On account of its deep kernels and small cob it shells out heavily. It is one of the later, larger varieties of southern Minnesota and Wisconsin, and is also being used more in northern Iowa. Aside from color it is very similar to Silver King in ear and plant type.

"The man who purchases seed corn for next spring should investigate the source of the seed and be certain that it has come from a responsible grower or seed house specializing in seed corn production and fire drying of seed." *Wisconsin Experiment Station*



Rustler White Dent



Minnesota Ideal



### Minnesota No. 23 White Cap Yellow Semi Dent

Introduced in 1908 by the Minnesota Experiment Station.

There are many local strains of White Cap Yellow Dent, mostly of late maturity. Minnesota No. 23 came from Polk County originally, and is earlier and smaller than most of these strains.

Its main recommendations are its earliness and very uniform ears with high shelling percentage. It matures in 85 to 95 days, and grows 5 to 7 feet tall. Ears are tapering and 5 to 6 inches long, with 10 to 14 rows, and a circumference of 5 to 6 inches.

Kernels are fairly shallow with yellow sides and a white cap. Cobs are small and red.

Minnesota No. 23 is quite popular in parts of Northern Minnesota and North Dakota as a husking crop. For many years it was the only variety of dent earlier than Minnesota No. 13.

It yields well in grain, but is not recommended for fodder or ensilage.

On sandy soils its early maturity places it out of danger before the dry part of the summer and often gives a larger yield than later varieties.

### Wisconsin No. 12 Golden Glow Yellow Dent

Originated by the Wisconsin Experiment Station.

Golden Glow was originated by the Wisconsin Experiment Station by crossing Wisconsin No. 8 and the Tools North Star. It has become one of the most popular varieties in Wisconsin and several other states, especially to the east. It is later and larger than Wisconsin No. 8 and Minnesota No. 13, yields very well, with handsome ears.

It matures in 100 to 110 days and grows 8 to 10 feet high. The ears are 6 to 9 inches long, with soft golden yellow kernels, 16 to 18 rows to the cob. Cobs are cherry red. Ears are distinctively tapering, with kernels of moderate depth and width.

It is adapted for husking through southern Wisconsin and Minnesota as far north as the 100-day line. North of this it is one of the best varieties for ensilage and fodder, because of the large plant, with an abundance of leaves.

Compared with Silver King it is a trifle earlier, grows about the same size and is preferred on account of its yellow grain.



Wisconsin No. 12

### Wisconsin No. 8 Early Yellow Dent

Introduced by Wisconsin Experiment Station

Wisconsin No. 8 was developed by straight selective breeding from the Minnesota No. 13 variety by the Wisconsin Experiment Station.

It matures in 90 to 100 days, and grows 6 to 8 feet tall. Ears are 6 to 8 inches long and 7 to 9 inches in circumference, fairly smooth dent and slightly tapering, with 14 to 16 rows. Cob is red. Kernels are medium deep with a tendency towards dark sides.

Wisconsin No. 8 is especially adapted for husking through Central Wisconsin between the 90 and 100-day lines, also north of this for ensilage and fodder.

Wisconsin No. 8 gives way to the more popular variety of Golden Glow where the seasons are long enough to mature this later variety.



Minnesota No. 23

### Northrup, King & Co.'s

## STERLING SEED CORN BULLETIN

44 Pages 20 Colored Ears

**T**HIS is not a catalogue. It is a complete treatise on the twenty field corn varieties suitable for Northwestern planting, with photographic colored illustrations of the ears, same as the insert in this catalogue. While the descriptions are similar to those appearing on these pages, the book contains some information not listed here. It is also in more compact, convenient form to read and to save for reference.

The Sterling Seed Corn Bulletin is printed for distribution to the Farmer as well as to the dealer. It is featured in our Farm Journal advertising and attention is called to the fact that Sterling Seed Corn is sold only through dealers. Dealers who stock Sterling Seed Corn are entitled to reasonable quantities of Sterling Seed Corn Bulletins for distribution to their trade.

**Silver King Wisconsin No. 7****White Dent**

Originated By H. J. Goddard

Silver King is one of the oldest varieties we have, and, like its white sister, Rustler, is the best yielder in sections where it is adapted. Its outstanding features are its ability to yield well and the very typey ears it produces.

It matures in 100 to 110 days, and grows 7 to 9 feet high. Ears are 7 to 8 inches long, very cylindrical, with 16 to 20 rows, with a circumference of 7 to 8 inches. Kernels are quite deep. Cob small and white. The uniform, shapely ears make Silver King a favorite at corn shows.

Silver King has consistently won first place in an extensive yield contest held in northern Iowa, and is rapidly becoming very popular through southern Minnesota and Wisconsin. It can be safely grown for grain up to the 100-day growing season line, but Rustler should be used north of this line. For ensilage and fodder it is a heavy yielder and quite desirable for this purpose in the 90 to 100-day section.



Silver King Wis. No. 7.



Wisconsin No. 25.

**Flint Varieties****Longfellow Flint Yellow**

Longfellow is one of the later flints maturing in about the same time as Minnesota No. 13. It was originated by a descendant of the poet, and introduced in 1878 by a New England seed company.

The Sterling strain of Longfellow has especially handsome, smooth ears. For two years this strain grown in Minnesota has taken the highest flint corn prize awarded ten ears at the International show at Chicago.

**Extracts from Bulletin No. 107  
Montana Experiment Station**

**RUSTLER** This corn was first introduced by the Northrup Braslan Goodwin Co., of Minneapolis, Minn., in 1888.

**TRIUMPH FLINT** This corn was introduced by Northrup, King & Co., in 1899.

**MERCER FLINT** This corn was first catalogued as the Rideout or Mercer corn by Northrup, Braslan Goodwin Co., of Minneapolis, in 1888.

**MINN. KING** Prof. Sheppard says it was introduced by Northrup, Braslan Goodwin Co.

**LONGFELLOW FLINT** In 1884 the pioneer seed firm, Northrup Braslan Goodwin Co., of Minneapolis, Minn., catalogued it

**SMUT NOSE FLINT** Was catalogued and offered by Northrup, King Co., in 1898.

**Wisconsin No. 25.**

Wisconsin No. 25 is an extra early yellow dent developed by the Wisconsin Experiment Station at one of its northern sub-stations.

It is very similar to Extra Early Minnesota No. 13 in maturity and plant characteristics, but the ears of No. 25 have fewer rows and the kernels are broader.

It is very popular even though introduced only recently.

Wisconsin No. 25 matures in 85 to 95 days and grows 5 to 7 feet tall. Ears are 5 to 7 inches long and tapering, with 12 to 14 rows. Kernels are not deep, and, while yellow, have a tendency to be red on the sides.

It is adapted for husking throughout northern Wisconsin where the seasons are less than 90 days. It is one of the best contributions of the Wisconsin Experiment Station to the list of corn varieties, and fills a decided need.

Generally Speaking, the seed corn that produces the best crop is the cheapest. Farmers are justified in paying good prices if better seed corn is purchased.

Four hundred ears were divided into two equal lots, one lot being well cared for and the other placed in a barn as corn ordinarily is cribbed. The well-preserved seed produced yields 12% higher on poor and 27% higher on fertile soil than that poorly preserved notwithstanding the fact that both lots of seed germinated equally well. Farmers Bulletin No. 1175 U. S. Dept. of Agriculture.



Longfellow Flint.

### Triumph Flint Yellow

Introduced by Northrup, King & Co. in 1899.

Triumph is very similar to Mercer Flint, only larger. It grows from 5 to 7 feet tall and matures in 85 to 95 days. Ears are 5 to 7 inches long and 5 to 6 inches in circumference, with 12 to 14 rows of small, yellow kernels, with a decidedly tapering shape.

Triumph Flint is very popular for sheep pasture in Montana and North Dakota. It rarely fails to mature over the plain areas of these states and provides a large quantity of grain with a very leafy fodder.

The desirable characteristic of all flint varieties is their tendency to ripen early, which makes them popular for late planting. The stalks of the flints are of smaller diameter with a larger proportion of fine leaves than the dents. For this reason stock will often eat flint corn fodder up clean, while coarse stalks of dents are left on the ground, being too coarse to eat.

### King Philip Flint Red

Introduced by Northrup, King & Co. in 1884.

King Phillip Flint is a very old New England variety named after the famous Indian Chief. Its dark red color suggests the color of the Indian's skin. It grows from 5 to 7 feet high and matures in 85 to 95 days.

Ears have 8 rows, are dark red and slender, being 6 to 8 inches long.

King Phillip is very similar to Triumph and Smut Nose in plant characteristics and maturity and adapted to about the same uses.

In the New England states the name King Phillip is sometimes applied to a yellow flint, but in the Northwest the original red flint introduced by Northrup, King & Co. in 1884 is the only variety designated by that name.



Triumph Flint



Mercer Flint

### Gehu Flint Yellow Dwarf

Gehu grows 4 to 6 feet high and matures in 80 to 90 days.

Ears have 10 to 14 rows, are 5 to 7 inches long and  $4\frac{1}{2}$  to  $5\frac{1}{2}$  inches in circumference, very tapering.

Kernels are lemon yellow color, while Triumph and Mercer kernels are more of an orange or dark yellow color.

Gehu is one of the so-called squaw flints of a pure color.

It is not generally used as a husking variety on account of the ears being so close to the ground, but this feature makes it a desirable variety for early hogging down. Gehu usually produces more than one ear to the stalk.

It is the earliest yellow variety, only slightly later than North Dakota White Flint.

Introduced in 1889 and supposed to be a cross between an 8-row yellow squaw flint and Mercer. It is slightly earlier than Mercer and quite dwarf, although this feature shows considerable variation.

Flint corn is especially adapted for late planting. For years many farmers have planted flint varieties with very satisfactory results on low ground which was too wet to cultivate until June. Flint corn seems to have ability to grow and ripen in short periods. It produces a superior feed to dent corn because of the large number of leaves it carries and because the main stalk is not so coarse and large as on dents.

Flint varieties are used quite extensively for "hogging off" on account of their early maturity and the fact that ears are close to the ground.

### Mercer Flint Yellow

Introduced by Northrup, King & Co. in 1888.

Mercer Flint is a selection from the old Rideout variety, and is probably the most popular medium early flint in the northwest.

It is slightly earlier and smaller than Triumph, but yields well. It grows up to a better height to handle with a corn binder, which makes it more desirable than the real dwarf squaw flints. The plants grow  $4\frac{1}{2}$  to  $6\frac{1}{2}$  feet high and mature in 80 to 90 days.

Ears grow well up from the ground and are 5 to 6 inches long, with 10 to 14 rows of small yellow grain. The ear shape is decidedly tapering.

Mercer is adapted to husking along the Canadian border in the area having less than 90 days' growing season.

For hogging and sheeping down, or where the entire plant is fed to cattle, Mercer is a favorite.

It is the recommended medium early flint variety of the North Dakota Experiment Station.

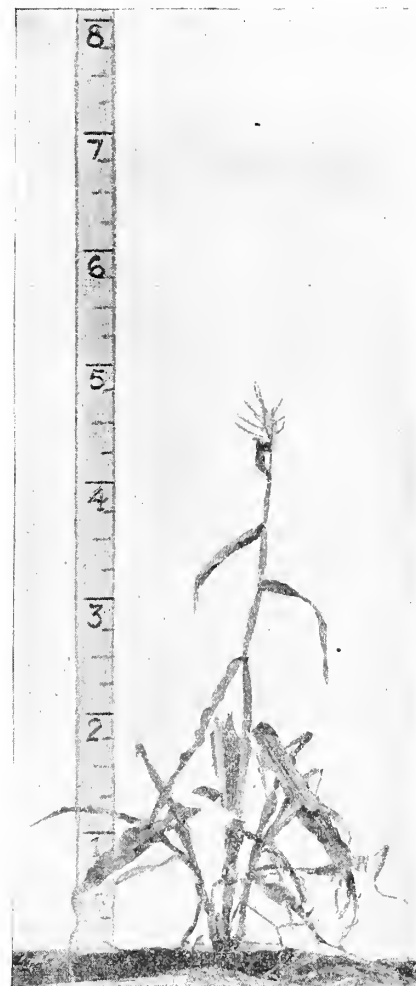
Its outstanding character is its large ears with 12 to 14 rows, where most flints have a slim ear with 8 rows.

### Smut Nose Flint

Smut Nose is an old New England variety of flint very popular in the New England States. It grows 5 to 7 feet high and matures in 85 to 95 days.

The ears are similar to Longfellow but of a rougher type, having a thicker cob and are more tapering. The ears are 7 to 9 inches long,  $4\frac{1}{2}$  to  $5\frac{1}{2}$  inches in circumference.

Kernels are yellow; arranged in 8 rows with a blaze of red kernels towards the tip of the ear, from which it derives its name, Smut Nose.



Gehu Flint





N. D. White Flint.

### North Dakota White Flint

North Dakota White Flint is one of the earliest standard varieties of flint corn, although there are a few varieties of flour corn somewhat earlier. It is supposed to be the same pure variety grown along the Missouri river in North Dakota by local Indian tribes when this country was first explored by white men.

It grows very dwarf, from 4 to 5 feet, and matures in 75 to 85 days.

Ears grow very close to the ground, have 8 rows, being about 5 to 6 inches long, decidedly tapering.

It is adapted to early hogging down and is ripe enough to turn into by August 1st in central Minnesota. In the extreme north it is one of the few husking varieties which can be depended upon to ripen. In these sections it is often cut with a mower and threshed with a threshing machine, a mixture of cobs and shelled corn being delivered from the grain spout.

It is the most popular variety of the dwarf flint group through northern Minnesota, North Dakota and Montana.

### Squaw Flint Mixed

Supposed to be a mixture of the various sorts once grown by North Dakota Indians as pure varieties.

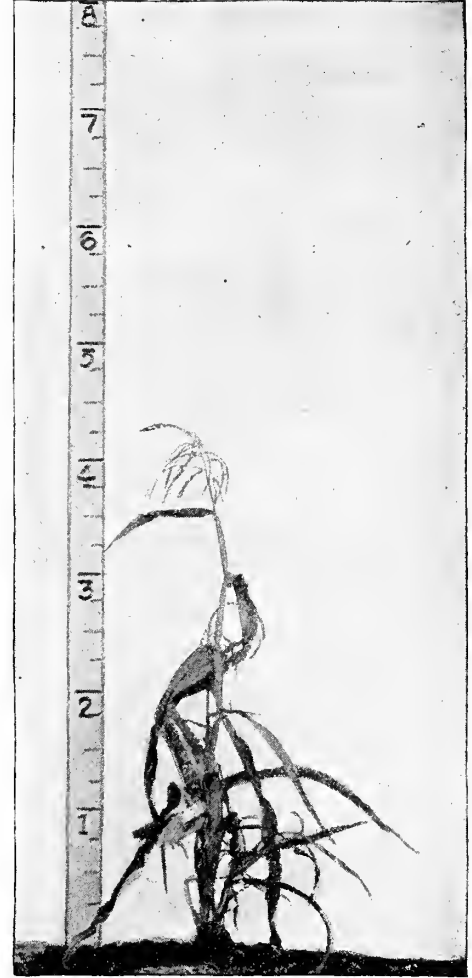
Kernels are a mixture of Red, Blue, White, and Yellow colors.

Plants grow 4 to 5 feet high and mature in 70 to 80 days.

Ears are 5 to 6 inches long, usually having 8 rows.

Mixed Squaw Flint is slightly earlier than North Dakota White, a trifle shorter, but a very vigorous variety.

It is adapted for hog or sheep pasture and yields much better than one would expect from a plant so short. In some sections where the growing season is very short, Mixed Squaw is the only variety which will make grain.



Squaw Flint.

## Varieties and Characteristics of Sterling Seed Corn.

Variety	Color Grain	Av. No. Days Planting to Maturity	Aver. Height Stalk of	Ear Characteristics	No. Rows of Grain on Cob	Average Ear Length	Aver. Ear Middle Circum.	Color Cob
N. W. Dent	Red, Yellow Cap	Under 90	5'-7"	Smooth, tapering	12-14	7"-9½"	5"-6"	White
Ex. Early N. W. Dent	Red, Yellow Cap	80-90	5'-6"	Smooth, cylindrical	12-14	5"-7"	4"-5"	White
Minn. No. 13	Yellow	90-100	6'-8"	Smooth, cylindrical	14-16	7"-9"	6"-7"	Red
Ex. Early Minn. No. 13	Yellow	85-95	5'-7"	Smooth, tapering	12-16	5"-7"	5"-7"	Red
Rustler	White	90-100	6'-8"	Smooth, tapering	14-16	8"-9"	5½"-6½"	White
Ideal	Yellow	100-110	7'-9"	Smooth, tapering	14-16	8"-10"	6"-7"	Red
Murdock	Yellow	100-110	7'-9"	Rough, cylindrical	16-20	6"-8"	7"-8"	Red
Minn. 23	Yellow, White Cap	Under 90	5'-6"	Smooth, tapering	10-12	5"-7"	5"-6"	Red
Wis. No. 7 or Silver King	White	100-110	7'-9"	Rough, cylindrical	16-20	7"-9"	7"-8"	White
Wis. No. 8	Yellow	90-100	6'-8"	Smooth, cylindrical	14-16	7"-9"	6"-7"	Red
Wis. No. 12	Yellow	100-110	7'-9"	Smooth, tapering	14-16	8"-9"	6½"-7½"	Red
Wis. No. 25	Yellow	Under 90	5'-6"	Smooth, cylindrical	14-16	5"-7"	5"-6"	Red
Triumph	Yellow	85-95	5'-7"	Smooth, tapering	12-14	8"-10"	5"-6"	White
Mercer	Yellow	85-95	5'-7"	Smooth, tapering	12-14	7"-9"	5"-6"	White
Longfellow	Yellow	90-100	6'-8"	Smooth, cylindrical	8	8"-10"	4"-5"	White
Smut Nose	Yellow, Red Tip	85-95	5'-7"	Smooth, cylindrical	8	7"-9"	4½"-5½"	White
King Phillip	Red	85-90	5'-7"	Smooth, cylindrical	8	6"-8"	4"-5"	White
Gehu	Yellow	80-90	5'-6"	Smooth, tapering	12-14	5"-7"	4½"-5½"	White
N. D. White	White	75-85	4'-5"	Smooth, tapering	8	5"-7"	4"-5"	White
Mixed Squaw Flint	Red, Blue, Yellow, White, Mixed	70-80	4'-5"	Smooth, tapering	8-12	5"-7"	4"-5"	White

## Northrup, King & Co.'s Sterling Silo Corn.

The building of silos throughout the Northwest, and more especially in Minnesota, Wisconsin and the Dakotas, has increased to a remarkable degree. More silos have been built in this part of the United States within the last few years than anytime previous. This has resulted in a demand for silage best adapted to feeding cattle, sheep, and other live stock on the farm.

Corn is one of the most largely used of the various crops useful for silage, but it is not so thoroughly understood as it should be that its value depends—

First, upon the condition in which it is put into the silo, and

Second, the purpose for which it is to be fed.

Large quantities of Southern Corn are used for silage in sections where ears will not form. Where a large bulk of green feed is desired, as in the case of young stock or milch cows, this Corn may be profitably used, but the feeding value is not nearly so great, ton for ton, as in the more nearly ripened Corn. Except (possibly) in such cases, all sections should use for general silage those varieties of Corn that will, in an average season, form well developed, if not perfectly matured ears.

Northern Grown Seed Corn of early maturity is recommended by Experiment Stations and Agricultural Authorities for planting for the Silo in the Northwest. Southern grown seed of late maturity deceives the planter by appearing to give a larger tonnage, but the extra weight is only water. Early maturing corn gives nearly twice the amount of dry matter. The results of an experiment to determine this show—

### Yield of 10 Acres of Corn Grown for Silage

	Late Maturing Lbs. from 10 A.	Early Maturing Lbs. from 10 A.
Water .....	129,170	101,670
Dry matter ....	48,100	75,600

More feed can be stored in the same silo when filled with silage from early maturing corn which can be cut at the proper silage stage, than with late maturing corn which often must be cut in the milk stage. Experiments have shown the following:

### Weight in Lbs. Per Acre

	Lbs. of Dry Matter	Per Cent Dry Matter
Corn cut at milk stage..	4643	14%
Corn cut at dent stage..	7560	25%

Experiments showed that 1.6 lbs. more grain per head daily must be fed with green corn silage to produce the same results as silage made from early maturing corn, cut at the right stage. Sixty-five lbs. more grain per day, or one ton more each month would have to be fed to a herd of 40 cows to produce the same results. Why feed a ton more grain each month? Save this money by planting the right corn for the silo.

Following this principle, we have selected leafy sorts as tall growing as the section permits, which may be relied upon, in ordinary seasons, to form full sized ears, and, in long seasons, to mature the Corn itself if so desired. We therefore recommend to our customers varieties which should be planted for silage as follows:

Minnesota No. 13 Silo Corn

Golden Glow (Wisconsin No. 12) Silo Corn

Wisconsin No. 8 Silo Corn

Silver King (Wisconsin No. 7) Silo Corn

All Minnesota Grown, Fire Dried, and of good Germination.

## PLANTING AND HARVESTING.

**Planting.** Generally speaking, the seed should be sown in drills 3 ft. 6 inches apart, using  $\frac{1}{4}$  to  $\frac{1}{2}$  bushel of seed per acre, depending not only on the soil, but also the purpose for which the silage is to be used. Whenever less grain and more bulk is desired about double seed may be planted to the acre, giving a greater amount of leaf and stalk but less ear Corn. For fattening beef cattle the opposite is true; the more ears produced the greater the fattening properties and for that reason less seed should be sown per acre, giving it a better opportunity to mature. In either case the tonnage per acre will be about the same. In the one case there will be more leaf and stalk and less ears and in the other instance the opposite, less stalk and leaf but more grain.

Also by the use of these varieties, if the grower wishes, it may be cut at an early stage of its growth and used as fodder. Later it may be put in the silo in any desired stage and if the season promises to be long enough, it may be allowed to ripen for grain if this be decided upon.

**Harvesting.** Corn intended for the silo should be harvested with a binder and the bundles allowed to remain in the field for a day or two, where they will lose a portion of the moisture. If the leaves become dry, water may be applied from a hose as the corn passes through the silage cutter. Corn that has been frosted and become partially dry in the field may also be treated in this manner, with water, and will make excellent silage.



Cutting Silo Corn on the Minnesota Experiment Station Farm.

**The Value of Proper Seed Stock.** The best seed obtainable costs more than crib Corn, but it is worth many times the difference to the grower. Our experience, of nearly a half century, in growing Seed Corn places us in a position to determine which are the best varieties for grain as well as for silage. We offer the varieties listed at the left with entire confidence, believing the yields will not disappoint those of our customers who want Seed Corn for special purposes.

## HOW TO FILL THE SILO.

**Cutting the Corn.** The proper time to cut Corn for silo filling is when the kernels are well dented and almost mature. The lower leaves are turning brown at this time but the stalks are still green and contain a large amount of succulence.

If cut while the Corn is still immature and green, the silage will be sour and too laxative in effect, neither does it then have the feeding value that silage made from more matured corn has.

**Caution.** The blow pipe must be as nearly perpendicular as possible, so that the air will sift the material. If the pipe has much slant, the material will settle on the lower side and clog, the air passing over it instead of pushing it up.

**Adding Water.** If Corn for any reason becomes over ripe and dry, excellent silage can still be made from it by adding water while it is being cut into the silo, a half a barrel to each load of Corn.

Good silage can be made from frosted Corn in the same way. In order to get a perfect distribution of water in the silage, it should be run through the blower with the silage. This can be done by running a steady stream into the blower by means of a small hose.

**Packing the Silage.** Thoroughly packing by tramping improves the quality of the silage. This should be done thoroughly, close to the wall. The center will take care of itself.

The surface of the silage while the silo is being filled should be kept concave, that is, lower in the center than at the walls. This will prevent an air space occurring between the wall and the silage from settling later.

**Danger.** When the Corn is cut into the silo it soon begins to heat, which causes large quantities of carbonic acid gas to be given off. The gas being heavier than air collects in the silo and must be given a chance to flow out before any one is sent into the silo when work commences in the morning.

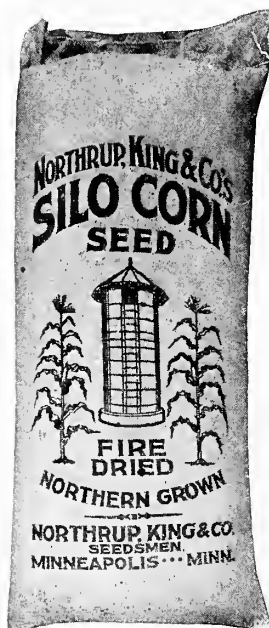
This may be done by opening a door at the surface of the silage. Running in fresh material will soon mix up the gas with fresh air and make it safe.

### Capacity of Silos.

Height	Diameter	Tons Capacity
24 feet	12 feet	51
28 feet	12 feet	61
28 feet	14 feet	86
30 feet	14 feet	92
32 feet	16 feet	120
34 feet	16 feet	128
32 feet	18 feet	162
34 feet	18 feet	172
36 feet	18 feet	182

### Silage for 200 Days.

No. of Animals to be fed	Lbs. fed per head per day	Tons silage required
15	25	32.5
15	30	45.0
15	35	67.5
20	30	60.0
20	35	70.0
20	40	80.0
25	35	87.5
25	40	100.0
30	35	105.0



# FODDER CORN



A Field of Northrup, King & Co.'s Elephant Fodder Corn. The inset up in the corner is the trademark design appearing on the bags.

## New Uses for Fodder Corn.

This excellent forage crop has been grown largely in the Corn growing sections because it produces more tons of feed an acre than any other grain or grass—15 tons an acre of green feed are often reported and occasionally 25 to 30 tons are produced on a single acre where conditions are most favorable for its development. Fodder Corn is now sown broadcast at the rate of two or three bushels an acre for supplemental pasture to be used when grass is short and often dry during the autumn months.

Dry Fodder Corn is probably the most satisfactory substitute for hay, according to the Minnesota Experiment Station. It should yield three to five tons of dry cured fodder per acre, which in feeding value is nearly equal to Timothy hay, ton for ton. Fodder Corn is a more profitable crop to grow than Timothy for fodder on account of its heavier yield. It can be fed to all classes of animals with fine results. Fodder Corn may be sown as late as July 1 with a reasonable assurance of getting a satisfactory return. This makes it fit in well as a catch crop after the other farm work is done. If the Fodder Corn is drilled in and Rape sown with it in the last cultivation, the mixture will furnish splendid summer pasture for sheep and pigs. By repeated sowings three acres of land should easily provide ample pasturage for from fifteen to eighteen brood sows and litters, for the season.

## Varieties of Fodder Corn.

Fodder Corn may be divided into five classes, viz: Large Southern Varieties, Medium Dent Varieties, Early Dent Varieties, Flint Varieties and Sweet Varieties. Each of these has its friends. All may be successfully grown for fodder in almost any latitude. The merits of each class are briefly stated under their respective headings. If further information is desired, we shall be glad to supply it as far as it lies within our power, and will be pleased to make recommendations when desired.

The question of which is the BEST Fodder Corn will probably never be fully settled any more than will be the question of the best breed of horses or cattle, so we try to present briefly and fairly the leading points of superiority claimed for each variety.

### To Kill Quack Grass.

Quack grass is taking possession of many of the best farms in the country. In such cases Fodder Corn is one of the best cover crops to smother this pest by shading it from the sun. Plow the quack grass sod late in the Fall, which, with the freezing of the roots will greatly injure the plant. Cultivate with a spring tooth harrow every week during April and May. Plant Giant or Elephant Fodder Corn in drills, using one bushel of seed an acre and thus smother the quack grass and other weed pests.

## MEDIUM DENT FODDER

### Northrup, King & Co.'s Elephant Fodder

**Corn.** A medium dent variety which has been popular because of its medium size, earlier maturity, finer and richer fodder and ease of handling through the silage cutter or when otherwise fed. It is tall growing, averaging 7 to 8 ft. It is very leafy. It has a small stalk. It will form, even in Northern Minnesota and in North Dakota, good sized ears, thus adding to its feeding value. It is low in price. Drill in rows about 3½ feet apart, and 60 lbs. per acre.

Elephant Fodder Corn has been registered in the United States Patent Office by us, as we have used this brand in connection with Fodder Corn for a great many years, in fact were the first to use it in this connection.

## LARGE SOUTHERN FODDER

### Northrup, King & Co.'s Giant Fodder Corn.



We believe that in most cases farmers can better afford to pay the price we ask for our Giant Fodder Corn than to plant other Southern varieties as a gift.

First, because in proportion to the quantity of leaf, this variety has a smaller stalk than any other variety. Second, while several other well known varieties of Fodder Corn often grow just as tall and even at times throw out leaves that are as large, the extraordinary productiveness of the Giant Fodder Corn arises from the closeness of the joints; and as leaves are thrown out from each joint, the result is an increased yield of fodder over any other variety. An extra pair of leaves on every stalk will more than pay the entire cost of seed on every acre of ground.

Drill 1 to 1½ bushels to the acre in rows about 3½ feet apart. Five or six kernels to each foot of row. The seed of this variety is very large and pure white.

### Northrup, King & Co.'s Red Cob Fodder

**Corn.** A tall growing Southern variety which is very popular all over the country. In Canada it seems to have the preference over any other sort, perhaps because it has been very widely grown and will produce a large tonnage in a short space of time. It grows very tall and very leafy and is exceeded in this respect only by our Giant Fodder Corn. The seed is white and grows on red cobs, thus giving it the name. Drill 1½ bu. to the acre in rows 3½ feet apart.

## EARLY DENT FODDER

**Early Yellow Dent Fodder Corn.** When sown thickly in drills, at the rate of one to one and a half bushels to the acre, this seed will give a surprising amount of rich feed, relished by all stock. It can be cut and run through an ensilage cutter for the silo just before maturity or it may be fed in the rack.

**Early White Dent Fodder Corn.** May be planted the same as the Yellow Dent Fodder Corn and matures at about the same time. While the Early Dent Fodder Corn does not yield so heavy a tonnage an acre, the resulting crop in most cases is of greater feeding value.

**Northwestern Dent Fodder Corn.** Favored on account of its tendency to grow many leaves and slender stock. Since Northwestern is of early maturity it may be planted later in the summer especially in extreme northern sections. Plant about 30 lbs. per acre in drill rows.

## SWEET VARIETIES FOR FODDER.

**Early Sweet Fodder Corn.** This makes capital fodder, and will mature ears in almost any part of the Northwest. The stalk is small, but sweet as honey and nothing can make better feed than this, fed ear and all. Drill 1½ to 2 bu. to the acre, in rows just far enough apart to admit cultivation.

**Late Sweet Fodder Corn.** All varieties of sweet Corn possess very much more "sugar" than any feed sort, and this being the most important constituent, it necessarily follows that the Corn holding this in greatest quantity has the greatest net value. Evergreen Sweet Fodder grows much taller than the Early Sweet Fodder and makes well formed, but not mature ears in almost any part of the Northwest. Drill 1½ to 2 bu. to the acre. Buy your seed early.



## THREE RELIABLE BRANDS And What They Mean to You.

The three brands illustrated here were adopted for the protection of our dealers and their costumers. It will be to your interest to know them.

Wherever you see a bag branded with one of these designs you can rely upon the quality of seed it contains, whether it is Clover, Timothy, Alfalfa, Blue Grass or any other variety.

These brands are being advertised throughout the Great North-west and people are demanding grass and field seeds bearing one of these trade marks. All three brands are registered in the U. S. Patent Office.

Why run the risk of sowing unknown seed of doubtful purity and germination when such dependable seeds as these can be procured?

Following is a brief summary of what these three brands stand for.

### Northrup, King & Co.'s Sterling Brand Seeds.



For those who want the best. Unexcelled for purity, germination, plumpness and color. Look for the Sterling trade mark.

Every bag of Grass or Clover seed put out by us under the name Sterling, will be sold only in our branded bags—every package bearing our name, our trade mark, and marked with a special stock number. None other is genuine.



### Northrup, King & Co.'s Northland Brand Seeds.

The greatest value for a reasonable price, of uniformly superior quality, carefully selected for high purity and strong germination. The Northland Goose is on every bag.



### Northrup, King & Co.'s Viking Brand Seeds.

Lowest in price, consistent with dependable quality. Strictly re-cleaned and tested for purity and germination. Every bag branded with the Viking ship.

### Seed Cost Is The Smallest Item Of Farming.

### It Always Pays To Sell And Plant The Best Seed Obtainable.

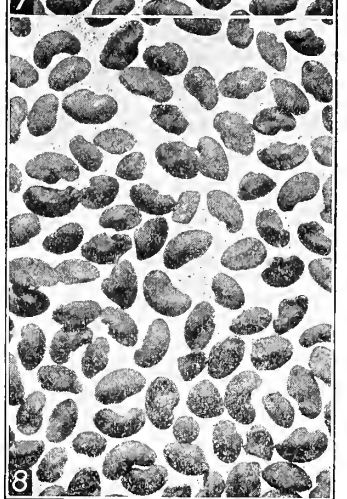
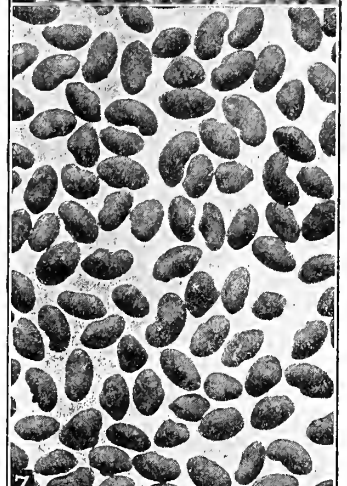
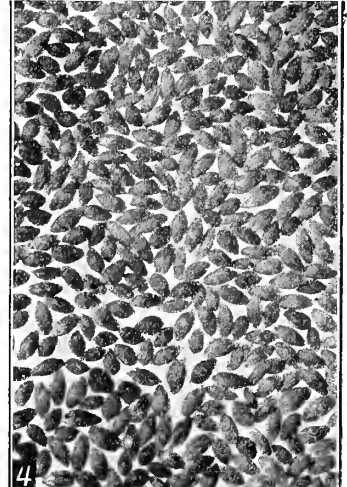
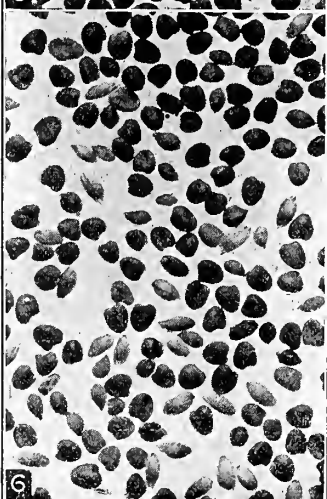
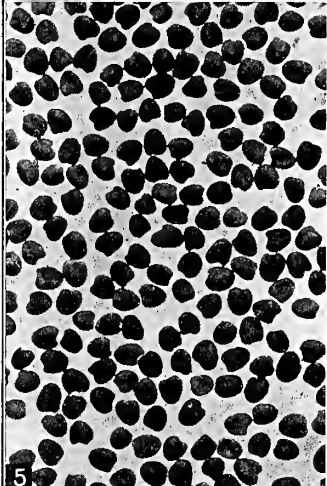
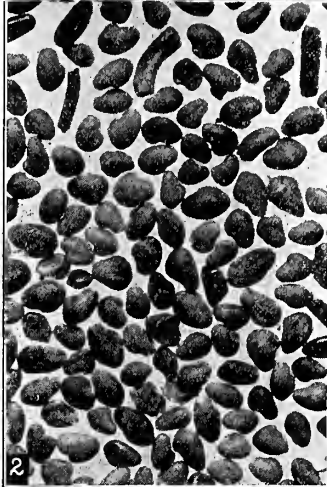
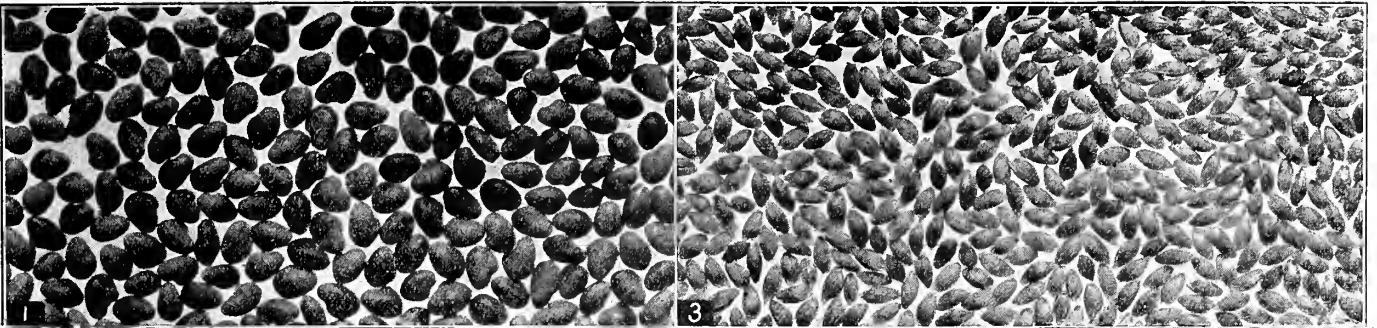
We urge every dealer to order early while it is possible to select the kind he needs and before stocks are depleted or sold out entirely. Farmers will obtain a distinct advantage if they plan as soon as possible all the crops they intend to grow and arrange at once for the best seed. Thus they can be sure of having what they prefer to use at planting time. If you wait till the last minute you may not be able to get the kind of seed your customers want, in time for sowing. Urge your farmer patrons to figure their requirements early so you can be of better service to them.

Get samples of our dependable brands and examine them carefully. Note the high percentage of purity and germination.

It is always profitable to plant reliable seed but this season more than ever before it is necessary to be as sure as possible that it is of high quality. A very large percentage of the users of our seeds now purchase our Sterling brand of Grass and Clover exclusively, and will not have any other. They have found it to their interest to pay a little more for this brand and be absolutely assured that they are getting as fine seed as money can buy.

### What the Microscope Reveals.

The photographs shown on this page are all magnified several diameters to demonstrate more clearly that which is not fully understood by those unfamiliar with the handling of Grass and Clover seed. The pictures numbered 1, 3, 5 and 7 are Northrup, King & Co.'s Sterling Brands of Medium Red Clover, Timothy, Alsike Clover and Northwestern Alfalfa respectively. It will be noted how pure and plump are these brands of seeds. On the other hand, the pictures numbered 2, 4, 6 and 8 are ordinary grades of seeds commonly offered on the market. The magnifying glass readily detects the weed seeds of all kinds, broken sticks and straws, immature, brown and shrunken seeds, dirt and refuse which are not only of no value, but prove of considerable loss and harm. These impurities pass by unnoticed until placed under the microscope. To avoid the sowing of doubtful quality seed on your customers' land and to give them real value for their money, it is always good judgment to offer them one of our three reliable brands.



## CLOVER SEED.

Red Clover is one of the most important and most widely known of all cultivated legumes. Either alone or in mixture with other plants chiefly timothy, it is the most used forage and soil-improving crop throughout northern and central North America and Europe, and its culture as a rotation crop extends for beyond these boundaries. For centuries it has been regarded as the corner stone of a permanent system of agriculture in the Old World, while in this country for nearly 200 years it has been a leading factor in conserving productivity of the soil.

Red Clover is adapted primarily to growing in rotations with other crops, and it has therefore been largely used in those regions where a variety of crops is grown. By far the most common method of utilization is to grow it in a three or four year rotation, including a cultivated crop and a small-grain crop, the first crop of clover being cut for hay and the aftermath being turned under or allowed to go to seed.

The small nodules or bacteria which cling to the root-lets possess the power to draw the nitrogen from the air and store it in the soil where it is most needed and where it can be drawn upon by subsequent crops.

U. S. Dept. of Agriculture, Bulletin No. 1339.

Clover makes an ideal hay for cattle and in the Clover sections should constitute from  $\frac{1}{2}$  to  $\frac{3}{4}$  the roughage ration of milk cows. Sheep and young stock of all kinds make excellent gains on either the pasture or the hay.

In many of the old clover section's there is increasing difficulty in successfully maintaining stands of clover upon the farm. The constant cropping and consequent depletion of humus and plant food in the soil makes it necessary to supply elements for its support. It consumes large quantities of potash, phosphorus and lime from the soil and therefore these elements must be replaced in the form of stable manure or commercial fertilizer supplying lime, phosphate, potash, etc. When farmers have difficulty in establishing a good stand it is wise to have their land tested by the county agent or the state agricultural station so that proper fertilizing elements may be supplied in the right proportion.

In the clover belt it generally follows that by feeding the crops on the farm and returning the manure to the land the fertility of the soil can usually be maintained for many years without the addition of commercial fertilizers.

It is generally admitted that throughout the clover belt, any soil that will successfully produce corn will produce satisfactory crops of clover. A deep soil is desirable for red clover that it may fully utilize its extensive root system which may extend down as far as 5 or 6 feet. It will not succeed if the ground is poorly drained or boggy. Alsike Clover is better than Red Clover for such soils. Where the soil is decidedly deficient in lime, this mineral must be supplied artificially.

The use of native American grown seed, produced in the north or in the high altitude areas of the western intermountain basins, is advocated for northern planting by all authorities. It has been definitely established that imported seed will not withstand the vigorous northern climate and the sudden extremes of temperature.

**All Northrup, King & Co.'s Clover Seed Is Strictly Domestic Grown And Acclimated To Northern Temperature Conditions.**

**Medium Red Clover.** This is the most popular member of the clover family and generally regarded as the most valuable. Sometimes called June Clover. It will produce two crops of hay and usually can be depended upon for a crop of hay and a crop of seed. It has the extra advantage of succeeding, under ordinary conditions, when seeded in connection with a grain crop, thus calling for very little extra labor when a clover stand is desired on the farm. It is about two weeks earlier than mammoth red clover, and is a biennial or two year crop. May be sown either in the Spring or Fall and where no other grasses are used, at the rate of 10 to 12 pounds to the acre according to quality of seed used and condition of the soil.

**Mammoth Red Clover.** This is grown largely for pasture and to restore fertility to depleted soils. It makes good hay if cut soon enough although it has a coarser stem than the Medium Red Clover. Mammoth Red Clover supplies fine grazing for stock. It sometimes yields more seed than Medium Red Clover. Being a rank grower, it is very valuable for fertilizing purposes. The foliage, flower and stem are darker in color than the Medium Red Clover. It ripens later, and makes only one crop. Especially valuable on light, sandy lands. Eight pounds of Sterling brand seed are sufficient to sow an acre.

**Alsike or Swedish Clover.** This is one of the hardiest varieties known. It is perennial and does not winter kill. It will do better on moist land than any other variety of Clover, and is suitable for either hay or pasture. When sown with other grasses, it forms a thick undergrowth and greatly increases the yield. It is frequently sown both with Medium Red Clover and with Timothy, and the quality of hay thus produced is excellent. It is fine-stemmed and leafy and thus is quickly cured. It makes a very profitable seed crop in many sections of the Northwest. Sow 8 to 10 lbs. per acre.

**White or Dutch Clover.** A low, close growing Clover; round white heads, very fragrant. Very desirable for beautifying the lawn. It will stand close cutting and very rapidly throws up an abundance of leaves and blossoms. It is usually better to sow with other grasses. Does well on most any soil.

### Nitragin For Clover Inoculation.

When seeding clover upon land for the first time, it is well to provide for artificial inoculation. This is accomplished by either scattering 200 to 300 lbs. of soil to the acre from some old healthy weedfree clover field or by the use of pure cultures. The soil transfer method is a very satisfactory one if properly done, but the pure-culture method has the advantages of ease of transportation and freedom from danger of introducing harmful pests upon the farm. It is endorsed and recommended by agricultural authorities and practical farmers.

The Pure Culture we sell and recommend is known under the trade title "Nitragin". It is packed in ventilated tin containers, is easy to mix with seed and easy to handle. Directions are on each package. There is a separate culture for each variety of legume, so in ordering be sure to state the crop to be inoculated. The "one bushel" size inoculates 60 lbs. of seed. Other sizes in proportion. See page 95 for further information.



**Alsike Clover.** Valuable for Both Pasture and Hay, Especially in Combination with Timothy.

# SWEET CLOVER

## EXPERIMENT STATION FINDINGS ON SWEET CLOVER

It is drouth-resistant and has the ability to produce a good quality of feed during a season of little rainfall.

—Illinois Bulletin No. 233.

6.4 tons of dry matter furnish as much humus-forming material and as much nitrogen as would be furnished by 25 tons of the average farm manure.

—Illinois Bulletin No. 233.

Sweet clover is a valuable farm crop. Experience has shown that it is excellent for green manure; it makes first rate pasture; and with proper care it can be made into hay and silage.

—Illinois Circular No. 29.

Sweet clover rarely causes bloat.

—Illinois Circular No. 29.

In the spring of the second year, sweet clover as a rule can be pastured two or three weeks earlier than any of the other regular pasture crops now in common use.

—Farmers Bulletin No. 1005, U. S. Dept. of Agriculture.

Sweet clover is unequalled by any other legume for soil improvement.

—Farmers Bulletin No. 1005, U. S. Dept. of Agriculture.

Mixed with blue grass, sweet clover makes a pasture of nearly double the carrying capacity of blue grass alone.

—Farmers Bulletin No. 1005, U. S. Dept. of Agriculture.

Sweet clover is rapidly taking its place as one of the most important of the legume crops in sections where only a few years ago it was considered a weed, and thrived as a weed along the roadside. It is a biennial plant which spends most of its first year of growth developing a large root with a top growth twelve to thirty inches high. The second year, under favorable conditions, if not disturbed, it grows a plant as high as seven to eight feet. When small, the plants resemble alfalfa, but when fully grown, the stems are coarser and more woody, and stand erect. It may be distinguished from alfalfa, at any stage of growth, by crushing a leaf between the fingers. Sweet clover gives off a distinctive sweet odor, while alfalfa has an ordinary green plant smell. Although some seed are developed the first year, general flowering and seeding does not take place until the second year.

## USES

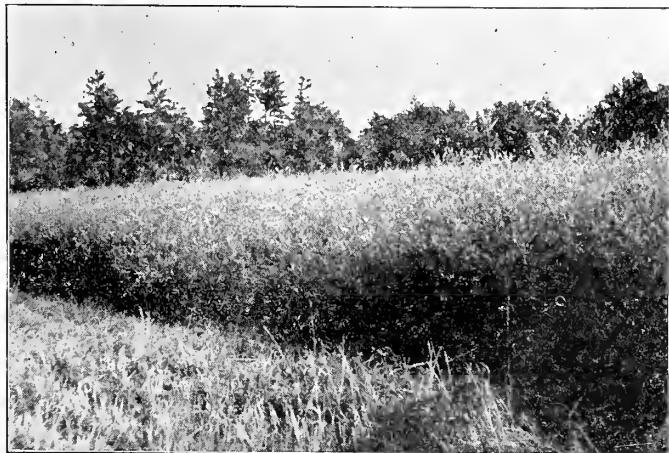
Outstanding characteristics of sweet clover are its ability to grow on a wide range of soils, its drouth resistant character, and its large and rapid growth.

Pasture and soil improvement are its most important uses although it is harvested also as a hay crop in many localities.

## PASTURE

When seeded with grain, as a nurse crop, sweet clover makes considerable growth in the stubble after the grain crop is harvested. This provides excellent pasture during the fall months, when blue grass pastures are often short. During the second year, it provides an abundance of pasturage with a carrying capacity several times that of blue grass or native grass pasture. The Minnesota Experiment Station reports sweet clover pastures over the state carrying one and one-half to three animals per acre where native grass pastures carried only one-half to one animal per acre. At the Crookston, Minnesota, Experiment Station, thirty-two animals were pastured on seven acres of sweet clover pasture, for eighty-eight days, from May 29 to August 25. Superiority of sweet clover pasture is especially evident in dry seasons. The sweet clover plant roots very deeply into the soil, and is not materially affected by ordinary drouths, while the shallow rooted blue grass becomes dry and short unless supplied by frequent rains.

While sweet clover is a biennial plant, many farmers have maintained permanent pastures because of the seed which ripens the second year, producing a new stand of plants for the third and fourth year. It seems advisable to clip sweet clover



A Typical Stand of Sweet Clover

pastures, if the plants grow too tall, setting the mower as high as possible. Sometimes stock do not relish sweet clover at first, but the idea that animals will not eat sweet clover seems to be without foundation.

Many of the experiment stations are advocating more extensive use of sweet clover pasture, mainly for two reasons.

1. Less acreage is required.

2. It provides more dependable feed in dry weather.

The Illinois Experiment Station states that sweet clover rarely causes bloat.

We expect to see sweet clover pastures general throughout the Northwest within a few years.

## SOIL IMPROVEMENT

Sweet clover is unequalled by any other legume for soil improvement according to the United States Department of Agriculture. Its roots reach down into the subsoil, opening it up and bringing up plant food from areas not reached by ordinary farm crop. Being a leguminous crop, it gathers nitrogen from the air which becomes available to succeeding crop when the sweet clover crop is plowed under. The decayed plants form humus, improving the physical conditions of the soil as well as making it fertile. Heavy clay soils are made more easily worked, and sandy soils are made to hold water better, by plowing down sweet clover. Western Experiment stations report sweet clover valuable in reclaiming alkali soils. Soils which have a tendency to wash on the hillsides are often held in place by planting sweet clover. The crop may either be plowed under the fall of the first year, the spring of the second year, or the fall of the second year, after pasturing or cutting for hay. Many successful farmers are plowing down the crop for corn, late in April or early May, the next year after planting. The later plowing allows a larger growth of tops to be turned under. 6.4 tons of dry matter of sweet clover furnish as much nitrogen as would be furnished by twenty-five tons of the average farm manure, according to Dr. Cyril Hopkins, of the University of Illinois. Plowing under a crop of sweet clover would probably be equivalent to applying about ten loads of manure per acre.

## HAY

When properly handled, sweet clover makes a satisfactory quality of hay, equal in feed value to alfalfa, although coarser in texture. Experiment stations recommend cutting before blossoming time, when about two feet high, taking two crops for the season. Care should be taken not to allow the plants to grow too large and coarse. The sickle bar of the mower should be set as high as possible, since the new growths come from the stem instead of the crown. The hay should be raked and piled in small cocks as soon as wilted, and thoroughly cured before stacking. In some sections, binders are used to cut sweet clover for hay. Bundles are tied loosely, and shocked in long two-bundle shocks. Handling of the crop is made easier by this method. Some cut a crop of hay late in the fall, the same year as planting. This hay is about the same texture as alfalfa, but is mixed with straw from the stubble.

## SEED

Certain sections of the Northwest are becoming famous for sweet clover seed production. The seed crop is harvested the second year of growth. Often, the fields are clipped with a mower set as high as possible, early in June, in order to make the plant growth and seed maturity more even, and prevent too large growth of the matured plants. Harvesting is done with a grain binder when the majority of the seed is fairly ripe. If cut too late, the seed shatters badly. Sometimes, a crop of hay is cut during June, the second crop being saved for seed. This makes maturity of the seed crop rather late, with the result of many brown seeds in case of an early frost. Threshing is done with an ordinary threshing machine, which removes part of the hulls from the seed. The balance of the hulls must be removed by hullers or scarifiers.

## ROTATIONS

Sweet clover may take the place of Medium Red Clover in the crop rotation. A good three year rotation is:

1st year—Grain, seeded with sweet clover.

2nd year—Sweet clover for hay pasture or seed.

3rd year—Corn.

A few farmers use sweet clover in a two year rotation.

1st year—Grain, seeded with sweet clover.

2nd year—Corn.

In this case, the sweet clover is plowed the spring of the second year.

## PLANTING

Sow at the rate of ten to twenty lbs. per acre, with a nurse crop of grain, using one-half to two-thirds the usual amount of seed grain. It is important to inoculate the seed with "Nitragin" before planting. This provides the bacteria which makes it possible for the sweet clover plant to take nitrogen from the air and is more economical than soil inoculation methods. See page 95 for further information on Nitragin.

Brush pastures are often improved by scattering sweet clover seed on the snow any time from late fall to early spring. A proportion of this seed will work into the soil and produce plants.

## VARIETIES.

**White Blossom or Bokhara.** *Melilotus Alba*. This lives two years and then dies. It is the variety commonly referred to when "Sweet Clover" is mentioned and is the best for general use. This clover produces much more forage than the yellow varieties and a much larger root growth which adds extra humus to the soil.

**Yellow Blossom.** *Melilotus Officinalis*. This variety belongs to the same family as White Blossom Sweet Clover but is not so prolific in growth, the tonnage is a little less, is shorter in growth, but is from ten days to three weeks earlier and the stems are a little finer.

The flowers are yellow instead of white. For bee pasture and fertilizing purposes, we believe it to be equally valuable.

**Dwarf Crystal.** Is supposed to have originated in Grundy County, Ill. In the northwest it was first grown in the Red River Valley, in North Dakota, in 1920. A biennial, white blossom sweet clover that grows to the height of 3½ to 5 ft. Low branching and has finer stems than other varieties and matures earlier. Sow 10 lbs. of seed per acre.



# ALFALFA OR LUCERNE

## FACTS ABOUT ALFALFA.

Farmers Bulletin No. 1229 U. S. Department of Agriculture.

No Forage Crop cultivated in the United States is utilized successfully in so many ways as Alfalfa. It is more nearly a perfect forage than any other crop grown in this country. As hay it is unsurpassed for general feeding. As pasture it has a high carrying capacity and produces large gains. As a soiling crop it is valuable with proper handling.

Several experiments have shown that good Alfalfa hay is nearly, if not quite, equal to wheat bran, and when it is included in a ration the feed bill is reduced by doing away to a considerable extent with the necessity of purchasing protein feeds in the form of high priced concentrates.

The Ontario Agricultural College and Experimental Farm found that with alfalfa hay and silage a cow can maintain her milk flow on a very small cornmeal ration, and in cases of cows far advanced in lactation the meal ration may be omitted entirely without decreasing the milk flow.

Alfalfa hay is an excellent feed for sheep, either for breeding or fattening stock. While sheep may be kept in good condition on alfalfa hay alone, the addition of a little grain is advisable, both for breeding animals and for those being fattened.

Several state agricultural experiment stations have conducted experiments in feeding alfalfa hay to hogs. Practically all of them report very satisfactory results. In almost every case the addition of alfalfa hay to a grain ration reduced the cost of gains and improved the physical condition of the hogs.

Alfalfa is an ideal feed for brood sows and there is less trouble with swine diseases when liberal quantities are fed.

Recent experiments indicate that larger yields of hay result and stands are maintained in better condition when the cutting is delayed until the alfalfa plants are in full bloom.

Where winterkilling is a factor the last cutting of the season should take place early enough to allow for a growth of at least 6 to 8 inches for winter protection; otherwise serious injury is likely to result.

As far as palatability and carrying capacity are concerned, few plants excel alfalfa for pastureage. However, the crop should not be pastured the first year and though it may be pastured lightly the second it is better to delay grazing until the third year, by which time the plants will have become more thoroughly established.

No cases are recorded of alfalfa causing bloat when used as a soiling crop.

Farmers Bulletin No. 339 U. S. Department of Agriculture.

The Arizona Agricultural Experiment Station estimates that by utilizing alfalfa as a soiling crop 35 acres will carry 100 steers weighing 900 pounds each through the growing season, which is about double what could be expected from pastureage. In Canada it is claimed that the cost of producing pork is reduced 25 to 50 per cent when green alfalfa is fed with grain, as compared with grain alone.

An average field of alfalfa will support continuously during the growing season about ten large hogs to the acre and enable them to make good gains, especially if a small quantity of grain is fed in addition.

The readiness with which alfalfa renews its growth after each cutting, as well as its value as a feed, makes it an ideal soiling plant for all classes of stock.

So far as climate is concerned, Alfalfa can be grown in every state in the Union.

From its original home in Asia, Alfalfa has been carried to all parts of the world where agriculture is important. The name "Alfalfa" is Arabic for "the best fodder." It has been grown in the eastern states for 200 years and is now the staple, leguminous forage crop throughout the western half of our country. Alfalfa has been grown successfully in Minnesota for over fifty-five years. Descriptions of varieties suitable for this and other extreme climates are to be found on page 95.

**Characteristics.** One of the most important characteristics of Alfalfa is the long tap root, frequently extending fifteen or more feet into the soil. Unlike most farm crops, Alfalfa makes nearly all of its growth below ground the first season. The deep growing roots penetrate the sub-soils and bring to the top soil the phosphorus and potash stored below, making them available as plant food for the succeeding crop. After the great roots decay they form passages for air and water, besides leaving openings for the roots of the next crop.

As a soil builder, the Iowa Experiment Station claims that an acre of Alfalfa adds over twice as much nitrogen to the land as the average acre of Red Clover. Nitrogen is the most important element in the soil and the one most likely to give out. Alfalfa does not ask the farmer for nitrogen because it gets its nitrogen from the atmosphere.

## RULES FOR SUCCESS.

**1. Plant in deep, loose, friable soil.** If the soil is shallow the Alfalfa plant cannot utilize its deep-feeding root system and is likely to be choked out by surface-feeding weeds. The roots can, however, penetrate rather stiff, clay soils and sometimes go through hard-pan. Soils that are light on account of being sandy usually lack fertility, but this can often be corrected by the free use of manure. Good fields are sometimes found on heavy clay soils.

The seed bed should be fine on top, but well settled. It usually requires six weeks for plowed land to settle enough for seeding. The land should be disked and harrowed right after plowing. Then work it every ten days or

two weeks until the seed is sown; this will insure sufficient moisture for germination. When late seeding is practiced, begin to cultivate as soon as the preceding crop is removed.

For some soils disking is sufficient. This is of course less expensive than plowing and it does not take so much time for disked land to settle as it does for the plowed land. The preparation must be uniformly good, as the poorly prepared spots are sure to fail and become weed centers later. Summer fallowing is often practiced in the semi-arid regions to conserve moisture for germination of seed at planting time and destroy weeds.

For sandy ground apply a light top dressing of straw or coarse manure just before seeding to prevent the soil from drifting, or sow the Alfalfa in a thin stand of small grain, such as barley.

**2. The soil must be well drained.** Alfalfa does not thrive where the water table is within six feet of the surface.

The land must be well drained, either naturally or by the use of tile or open ditches. Fine results have been obtained on drained bottom-lands. Land slightly rolling or nearly level and well drained is usually considered the best. Alfalfa is often killed by overflow from streams. During the growing period it will not usually stand more than twenty-four hours of complete submergence or forty-eight of partial overflow.

When sown on land with dry sub-soil, the roots penetrate for a few inches through the moist top soil and then reach the dry, hard sub-soil located perhaps at the bottom of the furrow slice. Being unable to penetrate this dry soil, the roots stop growing or run horizontally in the bottom of the furrow, thus forming only a shallow root system. To prevent this condition, either plow in the Autumn or else wait six weeks for the ground to settle before planting Alfalfa in the Spring.

**3. Inoculation is necessary.** Inoculation means putting or planting in the soil, nitrogen-fixing germs or bacteria without which the Alfalfa cannot flourish. Where Sweet Clover grows wild, in the field or along the roadside, artificial inoculation for Alfalfa may not be necessary as the same germs grow on the Sweet Clover as on Alfalfa and natural inoculation takes place. But there is no other plant which commonly grows wild in the North that can support the same germs as the Alfalfa. All the legumes including clover, peas and beans bear bacteria but a special kind lives on each plant.

These germs on the Alfalfa roots form nodules from the size of a pin head to a pea.

There are several methods of inoculating Alfalfa seed but we recommend the use of Nitragin described on page 95.

**4. Use Lime for soil acidity.** Alfalfa will not grow where the soil is acid. This is often the case where corn and wheat have been raised for many years. A simple test for acidity is to make a deep cut in the ground with a knife, pressing the earth slightly apart, then push a piece of blue litmus paper (procureable at any drug store) into the opening, press the earth together and leave it for several hours. If the paper turns from blue to red it is proof of acidity. This test should be tried in several parts of the field.

Lime is the principal material needed to sweeten acid soils. It is also as necessary for plant growth as nitrogen or phosphorus. If agricultural lime does not cost over \$3.00 per ton it is better to use it than burned lime which is caustic. Up to two tons per acre of caustic lime, if well distributed, is safe to use. If ground limestone is applied, it should be very finely ground and spread at the rate of 1500 to 3000 pounds per acre.

Lime is to be applied after plowing and thoroughly disked in, preferably some weeks in advance of seeding. It may be spread from a wagon with a shovel, or with a manure spreader or broadcast grain seeder. There is little danger of using too much lime.

**5. The land must be free from weeds.** Young Alfalfa plants are very tender and are likely to be killed by weeds during their early stages of growth. On this account the land should be as free from weeds as possible. Raising a cultivated crop or a crop like clover, which naturally prevents weed growth, will help to check weeds. If a weedy soil must be used, plow the land several months before seeding the Alfalfa and destroy the weeds as they appear by frequent harrowings. Weeds are especially harmful to spring-seeded Alfalfa, so for this reason spring seeding should be avoided in some sections.

**6. Selection of seed is most important.** Poor seed is a primary and great cause of a poor stand. In buying Alfalfa Seed the highest priced seed of a certain variety is often the cheapest. The loss is much greater in using seed of poor quality, than the difference in cost of the seed. This loss comes from the labor thrown away, the stands lost and yields sacrificed by its use, as well as the final expense in getting rid of the weed seeds introduced.

**7. Sow the seed so it will be covered.** Alfalfa Seed must be covered, not sown on the surface, as is sometimes done with grasses and clovers. It may be planted with drill or seeded broadcast by hand, hand seeder or wheelbarrow seeder. It is advisable to sow half the seed one way across the field and the other half at right angles to secure an even distribution.

Depth of planting depends upon the soil. Covering three quarters to one inch deep is usually sufficient on clay soils, but one and one-half inches deep is required on sandy soil, or in the semi-arid sections. When sown broadcast, a light harrow, weeder or brush is used to cover seed.

**8. Use plenty of seed.** Much more seed is required in the humid sections of the country than in the semi-arid, and irrigated districts. Good stands from five pounds of seed per acre are not rare in the West. For the central and eastern states ten to twelve pounds per acre is the usual amount and this may be increased to twenty pounds if it is necessary for the Alfalfa to cover the ground from the start, to prevent weeds from becoming established. The quantity to sow will also depend upon the condition of the soil as to moisture, the weather conditions and seeding method employed. With land prepared by sowing a few pounds of seed six months to a year preceding, with a heavy application of stable manure plowed under six months before, perfect soil preparation, normal moisture, clean seed of high germination—10 pounds of seed per acre should be sufficient.

**9. Using a nurse crop often advisable.** Weeds are likely to prove troublesome for Spring seeded Alfalfa unless the ground is clean from previous cultivation. A nurse crop helps to check the weeds until the Alfalfa Seed starts. The nurse crop takes some of the moisture and plant food from the Alfalfa and shades it. But it gives the advantage of planting the Alfalfa with little additional expense, except the cost of the seed. Moreover by this method it is not necessary to give up the use of the land for a whole season to get the Alfalfa established.

Barley, wheat or rye are better for a nurse crop than oats. Oats require more water and give too much shade. Do not sow Alfalfa seed with the grain but plant each separately. Reduce from one-third to one-half the regular rate of grain seeding when using it for a nurse crop.

## ALFALFA SEED

Sow 10 to 12 Pounds per Acre.

### Northrup, King & Co.'s NORTHWESTERN GROWN ALFALFA

We especially recommend this variety to Northwestern farmers because of its hardiness and real economy. Its price, for instance, is only a little more than half as much as asked for Grimm, yet it gives unusual satisfaction. The seed is produced in the high altitudes of the western inter-mountain basins where extremes of temperature test the parent plants to the utmost. Weather records show that these districts have had frosts in every month of the year and it is common for extreme variations such as 59 above zero and 34 below zero in the month of January and other winter months. In winter the heavy winds sweep the snow covering off the plants, leaving them exposed. During the greater part of the growing season the days are warm, often hot, and the nights are cool. The soil there is wonderfully adapted to raising alfalfa seed and the large quantities produced enable us to offer it at extremely reasonable price. The seed is thoroughly cleaned, plump, of beautiful color and excellent germination. We have handled this seed for years and know you will find it all we claim.

### Northrup, King & Co.'s Sterling Montana Grown Alfalfa.

Montana produces a very fine grade of Alfalfa. The seed is usually exceptionally large and of high germination. Montana grown Alfalfa is extremely hardy and some prefer it to seed from any other locality. Our seed is obtained in those sections where plants have endured the extreme cold of Winter and thrive in high altitudes. Not only has our experience of several seasons demonstrated the superiority of this seed under adverse climatic conditions throughout the entire Northwest, but more recent experiments of both the Minnesota and North Dakota Agricultural Stations have established the superior hardiness of Montana grown Alfalfa.

**Grimm Alfalfa.** Bulletin 209, U. S. Dept. of Agriculture, records that Grimm Alfalfa was introduced into Carver County, Minn., in 1857, by Wendelin Grimm, an immigrant from Europe. His original lot of seed, which did not exceed 15 or 20 pounds, was sowed in the spring of 1858. Several years passed before sufficient seed was raised to afford opportunity for distribution. The Minnesota Agricultural Experiment Station took up the subject and efforts were made to extend Grimm culture. In 1905 the U. S. Dept. of Agriculture began to experiment with this variety and since then it has been grown in comparison with a large number of varieties and strains and in practically every case has proved itself equal, if not superior, to any of these in hardiness. Grimm Alfalfa is particularly recommended for the northern part of the Great Plain region and all parts of the Northwest where little protection is afforded by snow. It has also proved better able to survive the winters in the colder portions of the humid section of the country, where winter killing is a serious factor.

### Northrup, King & Co.'s Sterling Dakota Grown Alfalfa.

Experiment stations and other authorities all agree as to the advantages of northern grown Alfalfa seed. Even when the seed originally sown was not especially cold-resistant the more tender plants are soon eliminated, leaving the hardier plants to produce seed. Seed from such fields is always preferable for northern planting to seed produced farther south.

Our Sterling Dakota Grown Alfalfa is especially recommended for northern planting. This seed comes from long established fields. It is splendid, plump and fine colored. Our seed was grown at an altitude of between three and four thousand feet, where the rainfall rarely exceeds eight inches per annum. The temperature reaches both extremes, exceedingly hot and dry in Summer and down to 30 to 40 degrees below zero in Winter, with little or no protection by snow. Plants which survive these rigid tests are very hardy plants and the seed produced from these fields inherits the vigorous tendencies of the parent plants.

To Obtain A Good Stand And Permanent Growth  
Of All Legumes Such As Alfalfa, Clover, Peas,  
Beans, Vetch, etc. Inoculate Your Soil With



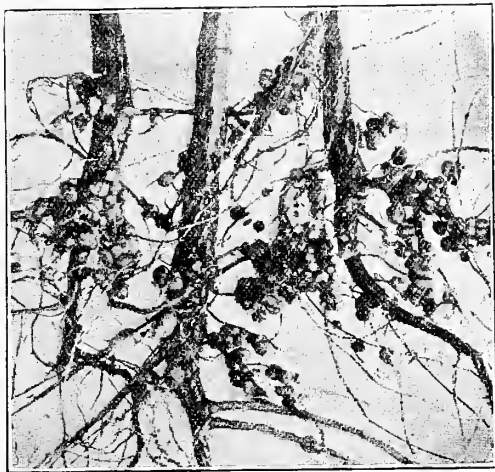
On the roots of all healthy legumes, or pod bearing plants, such as clovers, alfalfa, beans, peas, vetch, etc., there are found many little lumps or nodules. Back in 1886 a noted scientist placed a few of these nodules under a powerful glass and discovered each lump contained millions of germs or bacteria. Further study revealed that these bacteria had the power to take nitrogen out of the air and make it into a nitrogen plant food. Each nodule is a storehouse of nitrogen, the most important food element for legumes. Where a legume seed germinates in the soil it sends out tiny hair roots looking for nitrogen. If the nitrogen bacteria exist in the soil, they enter these tiny hair roots and start gathering the nitrogen from the air in the soil. Bacteria are lively little bugs and gather more nitrogen than is consumed by the growing legume plant. Thus the soil is greatly enriched for any crop which may follow the legume.

Now what happens when there are none or too few of these valuable little bacteria in the soil? The crop of clover, alfalfa, etc., either obtains only a poor stand or fails altogether. Here is where Nitratin comes in.

Nitratin is the trade name of a soil inoculator discovered by two scientists, Noble and Hiltner, several years after it was demonstrated that the root nodules contained millions of nitrogen-gathering bacteria. These scientists invented this "culture" or preparation by which nitrogen-gathering bacteria could be put in the soil along with the legume seed. Nitratin looks like a deep rich soil. It is easy to mix with the seed. No sugar or other ingredients necessary. Just add water and mix it with the seed according to the directions on the label.

In their research work Noble and Hiltner discovered another very interesting and important fact—that bacteria of Sweet Clover will not work with other legume bacteria except alfalfa—that soy bean germs are unlike those of cow peas, etc. Therefore a separate culture must be used for each legume.

Nitratin is sold on the bushel basis. The one bushel size (shipping weight 10 oz.) will inoculate one bushel of legume seed. Also put up in ¼ bu., ½ bu., and 5 bu. sizes. These inoculating bacteria are shipped in ventilated tin boxes which never break. Germs must have air and moisture. When ordering be sure to mention the quantity you wish for each legume—Alfalfa, Sweet Clover, Soy Beans, All Clovers, Vetch, Cow Peas, Beans, Peas, etc.



Nitrogen Gathering Nodules



Alfalfa Hay in the cock. Land values are sure to increase, where three crops like this are cut each year.

# HIGH GRADE FERTILIZER AND LAWN DRESSING

Our prices include sacks and delivery within the city limits of Minneapolis. 500 lbs. of one kind at ton rate, except where 500 lb. or 1000 lb. price is quoted. We cannot break bags except as noted. Ask for market prices.



## Northrup, King & Co.'s Sterling Garden and Lawn Fertilizer.

Analysis; Ammonia, 2 per cent; available Phosphoric Acid, 10 per cent; Potash, 2 per cent.

Is the result of careful study, experiments and experience. It contains in the right proportions, a concentration of the elements which nourish and feed grass into luxuriant growth. It produces a rich, green color, and insures a permanent evenness over the whole surface of your lawn. It is not unpleasant to handle, being odorless, and as it is dry and fine it is easily put on. Two or three applications in a season, at the rate of a pound to every hundred square feet, will keep your grass in flourishing condition—perfectly healthy and able to stand any amount of sun if watered.

**When and How to Put it on Your Lawn.** The first application should be in the early Spring—just as soon as the frost is out of the ground. Scatter it by hand carefully and evenly. Use from 10 to 15 lbs. on every 1000 sq. ft. or 400 to 500 lbs. per acre, and if it can be put on just before a rain, so much the better. If unable to do this, wet it down with a hose as soon as possible after applying. For new lawns, Sterling Garden and Lawn Fertilizer can be used to good advantage either alone, using 1000 pounds per acre, or in combination with sheep or cattle manure, working it into the soil before sowing the seed.

**For Vegetables and Flowers.** Apply in early Spring at the rate of 15 lbs. per 1000 square feet, forking it in well. For late use, sprinkle it carefully around the plants and between the rows. Do not let it touch the plant roots. A teaspoonful or so stirred in the soil about the roots of each plant two or three times during the season will give you astonishing results. Always water plants thoroughly after fertilizing.

**For House Plants.** A teaspoonful of Sterling Fertilizer dissolved in a quart of water and this solution poured around the roots of house plants will greatly invigorate them. Stir solution while pouring so as to keep it well mixed, and apply as often as the plants seem to need it—say every week or ten days, or until they are as healthy as you wish.

Bags of 5 lbs., 10 lbs., 25 lbs., 50 lbs., 100 lbs., 500 lbs.

## Northrup, King & Co.'s Steamed Bone Meal.

Analysis; Nitrogen, 3.75 per cent; equal to Ammonia, 4.50 per cent; Phosphoric Acid (from bone), 23.00 per cent.

This is finely ground and of first quality; it starts to decompose quickly and continues for a long period its improvement in the soil fertility; it is less likely than other fertilizers to leach or waste. With bone there is no danger of burning the plants. Use 3 to 5 pounds of bone meal for each tree and vine when setting it out, working it around the roots.

**Lawns.** For new lawns, use 500 lbs. of bone meal with a ton of sheep manure per acre. This should be plowed under or spaded in, several weeks before sowing the seed. Old lawns, top dress very early in Spring with sheep manure and bone meal mixed, at 2200 lbs. per acre or 50 lbs. per 1000 sq. ft.

**Field and Garden Crops.**  $\frac{3}{4}$  to 1 ton broadcasted and harrowed in. This is especially desirable for use with sheep manure, which is rich in nitrogen.

**Permanent Pastures and Meadows.** Use  $\frac{1}{2}$  to 1 ton per acre before growth starts in the Spring.

**Roses and Flowering Plants.** ground bone is one of the most useful forms from which to furnish both Nitrogen and Phosphoric Acid in slowly available forms. A good mixture for both the field and prepared soils is four parts of ground bone and one of muriate of potash, applied at the rate of four pounds per square rod, and preferably worked into the soil previous to setting the plants; a second application may be made in the Fall at the same rate. For pot plants use one part bone meal to 50 of soil.

Bags of 5 lbs., 10 lbs., 25 lbs., 50 lbs., 100 lbs., 500 lbs.

**SPECIAL NOTE:**—In order to make the proper use of fertilizer, it is necessary to note the analysis given under the name of each brand. Nitrogen gives the plant a quick start, imports vitality and grows the foliage, and while potash strengthens the stalk and fibre and improves the quality of some crops, it is the phosphoric acid which produces the grains, tubers and fruit, and matures the crops. Therefore Northrup, King & Co.'s, Sterling Garden and Lawn Fertilizer and Bone Meal should be used liberally and often.

## Sheep Manure.

Analysis; Ammonia, 2.50 per cent; Phosphoric Acid, 1.50 per cent; Potash, 1.50 per cent.

This is a splendid, complete fertilizer containing the necessary plant foods and is also rich in humus, or vegetable matter. It is excellent for general use either alone or in combination with other special purpose fertilizers. Having been kiln dried, there is little danger from weed seeds. It can be used freely as it is not likely to burn anything. Part of it is very soluble so its effects are usually apparent soon after the application and for a long time afterwards. It is carefully selected, dried, pulverized and screened.

**For Lawns.** It should be applied by sprinkling lightly over the grass, in the Spring and up to July 15th. It requires no raking in. The color is not conspicuous and there is no objectionable odor. This will nourish the grass, act as a mulch, and tend to prevent the lawn from burning in hot weather. Use 50 lbs. per 1000 square feet or 25 lbs. with 25 lbs. of bone meal. See note on bone meal.

**For the Garden.** After the crop has been harvested in the Fall, the garden should be given a good coating of Sheep Manure. In the Spring put on another light coat and turn it under, or sow lightly in the rows.

**For Truck Garden.** Sheep Manure is a good fertilizer for the truck garden, producing better and earlier crops of onions, celery and other vegetables. Bags of 5 lbs., 10 lbs., 25 lbs., 50 lbs., 100 lbs.

## Swift's High Grade Acid Phosphate.

Guaranteed Analysis. Available Phosphoric acid 16.00 per cent.

Valuable for Winter Wheat, Rye, Barley, Clover, Alfalfa, Field Beans Field Peas and all crops needing available phosphoric acid. Should be sown broadcast at a rate not to exceed 500 lbs. to the acre. Acid phosphate added to stall manure is the most effective fertilizer known. While greater crops may be grown with large amounts of commercial fertilizers, the greatest economical returns and even yields come from phosphated manure. This new fertilizer is made by adding about 40 pounds of acid phosphate to a load of manure when it is removed from the stable or barn.

## Ben Franklin Agricultural Gypsum.

(Land Plaster)

Soil fertility depends upon the presence of ten chemical elements. Six of these are abundantly supplied by rain or moisture or else are present in sufficient quantities in nearly all American soils. The four remaining elements the farmer must put back artificially in order to maintain maximum fertility. These four are Sulphur, Calcium, Nitrogen and Phosphorus. Of these four needed elements Ben Franklin Agricultural Gypsum supplies three:—sulphur, calcium and nitrogen.

### Four Main Uses

1. For leguminous and other crops of high sulphur requirement.
2. As a preserver of nitrogen in manure.
3. In combination with ground rock phosphate is a complete, economical substitute for acid phosphate.
4. As a specific for black alkali soil.

### How To Apply To Various Crops.

Broadcast or sow with a lime sower Ben Franklin Agricultural Gypsum at the rate of 200 to 400 lbs. per acre as follows: For legumes in rotation, such as red clover, sweet clover and also for Alfalfa and white clover-blue grass, apply in the early Spring of the year the crop is to be mown. With the perennials, such as Alfalfa and white clover-blue grass, repeat the application every two or three years. In stubborn cases where a stand is difficult to obtain, apply at the time of sowing the seed.

### Garden Crops. Use 400 to 800 lbs. per acre.

For beans, peas, vetch, and peanuts, Agricultural Gypsum may be drilled in with the crop. With the peanut, it is common practice to apply Agricultural Gypsum as a top dressing when the crop is in flower.

Crops of the mustard family, cabbage, cauliflower, collards, turnips, rape, radishes, etc., use much sulphur. The sulphur increases their proteins. The odor of onions, chives, etc., in due to sulphur compounds. Potatoes, tobacco, grapes, raspberries and strawberries are also benefited by sulphur.

For turnips, radishes, tobacco, potatoes and cabbage apply Ben Franklin Agricultural Gypsum at the time of sowing the seeds or setting out the plants. In the case of vines and bushes, apply as a top dressing in the early Spring at the same rate. Gypsum may be applied alone or, much better, in combination with farm manure. Investigation of the use of agricultural gypsum extends back about one hundred and fifty years and the experiments were rather extensive somewhat more than a hundred years ago. All these showed that alfalfa and clover and various garden crops are rather generally favored by the use of this fertilizer. It is also found to be of great value in obtaining a white clover-blue grass lawn when used in combination with other manure.

### For Lawns.

Apply at the rate of 200 to 400 lbs. per acre as a top dressing or fork into the soil prior to time of seeding, especially where it has been found difficult to produce a uniform and rich sward.

### How to Use Ben Franklin Agricultural Gypsum with Manure.

Have you noticed the very strong odor about your barns? This is the best and most available part of the manure escaping into the air and this waste can be cheaply prevented if finely ground gypsum is applied to the manure in the stall. The ammonia will then be trapped and tied up in the manure as non-volatile ammonium sulphate.

Agricultural Gypsum should be applied to the manure in the stall two or three times a day at the rate of three to five pounds per animal. Mix well with manure, especially the liquid portion, because this portion contains the most nitrogen and the nitrogen which is most easily lost. The manure should, of course, be well packed and protected against leaching.

## Nitrate of Soda.

Quick in action; used for the nitrogen it contains. It creates rapid growth, is odorless and entirely soluble. It should be applied only when the plants are above ground, usually in combination with other chemical fertilizers. Nitrate of Soda is the best form in which nitrogen can be restored to the soil. It is of special value for early crops such as Peas, Corn, Beets, Cabbage, etc., when rapid maturity is essential, and of great benefit to hay and forage crops. Nitrate of Soda is a great stimulant for the production of Sugar Beets, Potatoes and Sorghum, also small fruits.

Use as a top dressing at the rate of 100 lbs. per acre on the following vegetables when plants are well established, viz.: Beet, Cabbage Cauliflower, Cucumber, Celery, Egg Plant, Lettuce, Spinach, and Onion.

For Asparagus use at the rate of 250 lbs. per acre as a top dressing after the first shoots make their appearance.

For Strawberries use 100 lbs. per acre as a top dressing after the plants have blossomed.

For Grass and Grain use at the rate of 100 lbs. to 200 lbs. per acre when growth is well established.

For the home garden, apply in soluble form, using one ounce to 2 gallons of water.

Nitrate of Soda should be applied directly to the soil and should not be allowed to touch the foliage.

For further information ask for Bulletin No. 172, sent free upon application. Bags of 1 lb., 5 lbs., 10 lbs., 25 lbs., 50 lbs., 100 lbs.

## Elements of Fertility.

**Nitrogen.** Its first function is to produce the green rank growth of the plant. Nitrogen makes green-r and quicker growth, more succulent and nourishing food. In fruits, after serving first in making leaf growth, Nitrogen is chiefly needed in forming the seed without which fruit would not develop. When properly supplied with the necessary Phosphoric Acid and Potash, about 75 per cent of the Nitrogen goes into the seed and grain.

**Phosphoric Acid.** Gives strength to the young plant in helping to expand its root growth and absorb the other necessary elements of plant food. It hastens and increases flowering and forces earlier maturity. As the crop gradually ripens from 70 to 90 per cent of the Phosphoric Acid consumed by the plant is transferred to the seed.

**Potash.** Its chief function is to form the cellular fibers, straw and woody growth of plants. It aids in producing sap, starch formation of grains, and juiciness and sweetness of fruits.



# NORTHROP, KING & CO.'S POULTRY AND MISCELLANEOUS FEEDS



**F**EEDS are largely composed of grains and grain products. Minneapolis is the large primary grain market, so we are ideally located to obtain excellent stocks at prices as low as any market affords. We do our own trading on the floor of the Minneapolis Chamber of Commerce, a fact which also facilitates our purchases. These advantages are passed along to our dealers in high quality and reasonable prices. Some dealers try to build their trade on price and it is our experience through more than 40 years that the price dealer does not build permanently. Results count and where poultrymen keep records of returns from feeds used, they invariably decide the little extra cost of quality feeds is money well spent.

See pages 98, 99 and 100 for full description of our Sterling Mashers and Sterling Scratch and Chick Feeds

## OYSTER SHELLS

Hens must have lime in some form to furnish material for egg shells. Oyster shells are practically pure lime carbonate. Too many poultry feeders forget about the need of the hen until their flock lays soft or thin shelled eggs. Every poultry house should have a pan or hopper FULL of oyster shells at all times so that the birds can have access to it. Sterling Brand Crushed Oyster Shells are screened to proper size and all the fine dust and dirt is removed so that there is no waste in feeding.

## MEAT SCRAPS, TANKAGE, BONE

Meat Scraps are rich in protein, the material which makes muscles, lean meat and part of the egg. Birds, old and young, should have some kind of MEAT protein, and Meat Scraps furnish this element in easy-to-feed form.

Tankage, while high in animal protein (60%), is not relished by fowls as much as Meat Scraps, yet when added to Bran and other mash materials it is readily eaten. Tankage is also in great demand as part of a hog feed ration.

Bone should be kept before the birds all the time. It is made from fresh bones with the moisture, grease, etc., extracted, leaving only the phosphate of lime and protein. It is prepared in two sizes: medium for hens and chicks, and powdered.

## GRIT and CHARCOAL

MICA CRYSTAL GRIT is not only sharp and hard, but its properties are such that it acts as a tonic and contributes iron and other important elements.

STERLING GRIT is made from LIMESTONE, which, according to the analysis of the STATE SOILS LABORATORY, University of Wisconsin, contains 99.93 per cent of calcium carbonate.

CHARCOAL is one of the greatest disease preventives for poultry. It aids in digestion, purifies the blood, and regulates the bowels.

## BRAN, MIDDLINGS, OIL MEAL, ETC.

In order to serve the greatest number of customers with a most complete assortment of feeds and in order that dealers may be able to buy mixed cars and so have full stocks at all times, we list such feeds as BRAN, MIDDLINGS, OIL MEAL, GLUTEN FEED, ALFALFA MEAL, HOMINY FEED, COTTONSEED MEAL, BEET PULP, ETC. Prices are governed by market conditions.

## CORN, OATS, WHEAT, BARLEY, ETC.

Northrup, King & Co. make it possible for the dealer to carry all these necessary grains, buying them in mixed cars with other feeds and so overcome the necessity of stocking a full carload of each one.

## SPECIAL SCRATCH FEED

A balanced grain ration at a moderate cost, composed of sound, sweet, re-cleaned grains—carefully milled and automatically blended to a standard formula. Less concentrated feeding value than in Sterling Scratch Feed, but a mighty good ration at a moderate price. Put up in bags with special design as shown at the left. The stripes are blue with red lettering.

## NOKIC SCRATCH FEED

A splendid combination of grains at the lowest price at which it is consistent to manufacture feed from re-cleaned, sound, sweet grains. Thoroughly milled and automatically mixed—entirely free from flour and screenings. Lower in feeding value than our Sterling or Special Scratch Feeds, but a good buy at the low price asked for it. Put up in bags with special design, as shown at the right.

## Three Sterling Feed Items Having Special Uses

### STERLING FATTENING FEED

This feed is a finishing ration for birds being prepared for market. It contains corn meal, oil meal, red dog, hulled oat meal, middlings and corn germ meal. It makes quick and economical gains in weight and produces a fine flavored, tender and well colored flesh. A Sterling Feed made with the usual care and sacked in a regular Sterling brand bag.

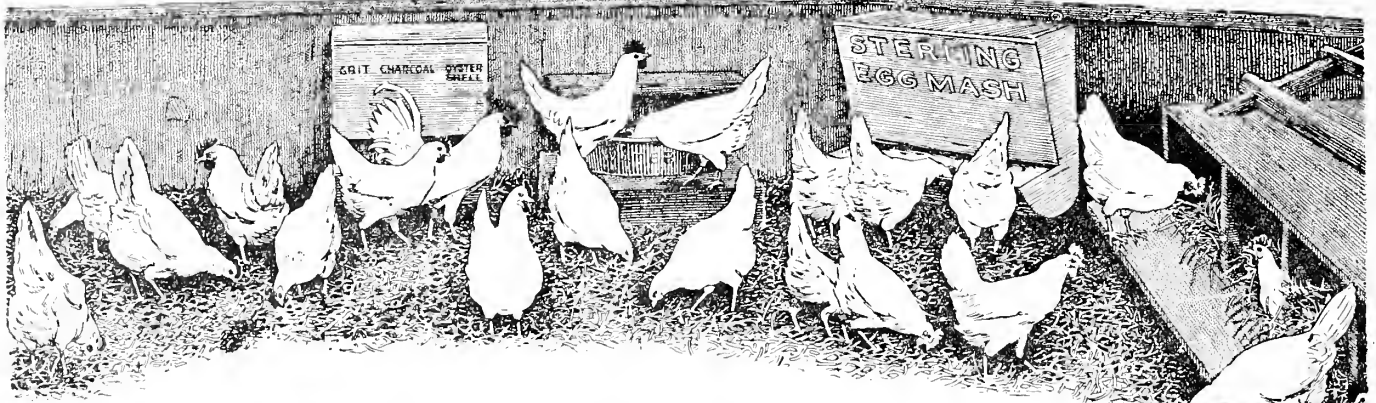
### STERLING PIGEON FEED

This mixture contains field peas, flint corn, milo maize, wheat, millet and hemp in proper proportion to make a well balanced feed. Relished by the birds and gives them strong, well developed bodies. Raisers of squabs find this a very satisfactory ration. Put up in a Sterling branded bag with red stripes.

### STERLING DAIRY FEED

A correct concentrate ration for the average milk producing cow. Furnishes a palatable combination of grains and feeds at lower price than dairymen can buy the ingredients and mix on the farm. Accurate feeding is possible, as Sterling Dairy Feed is always uniform in quality. Wherever mixed grain feeds for dairy cows are in demand, Sterling Dairy Feed can be sold by dealers with complete assurance of satisfaction and repeat sales.





## WHY STERLING EGG MASH MAKES MORE EGGS

Sterling Egg Mash is a prepared ration blended to a fixed formula. It is always uniform and very easy to feed. It is composed only of high grade materials—digestible and palatable. In balancing the protein content, we used Sterling Scratch Feed as the standard grain ration and then created a formula for Sterling Egg Mash, which provides the essential egg-making elements not found in grain feeds. Since protein is the most expensive feed element, it must be judiciously handled in a mash so that the returns are sufficiently profitable to justify the cost.

In Sterling Egg Mash, we offer a feed blended to give results with the average flock. There is no waste—it is all solid feed and when fed in hoppers every particle is utilized. While it costs more than grain feeds, its use in conjunction with Sterling Scratch Feed produces eggs at lower cost than when grain feeds are used alone. Large producers in the famous egg centers of the Northwest feed it and vouch for its economy and efficiency.

### Guaranteed To Satisfy

In each bag, 25-lb., 50-lb., or 100-lb., is placed a mandarin colored tag bearing our guaranty, through which entire purchase price will be refunded to any user who has followed directions and is dissatisfied.

### What Tests Show

Applying the figures obtained by the government and other chemists, showing the percentages of feed elements in the various grains, meals, etc., to the ingredients as proportioned in our feeds, we find they can produce as shown by the tabulation at the left.

### 76 More Eggs per 100 lbs.

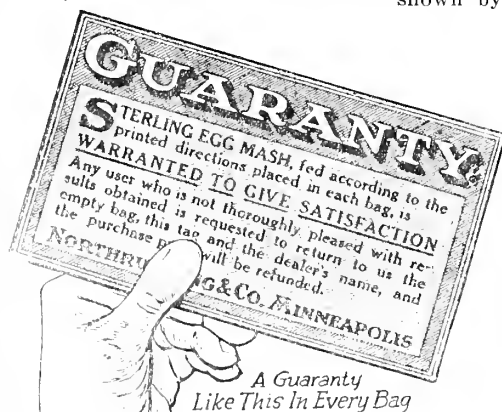
This means 438 eggs from 200 lbs. of feed—219 eggs from 100 lbs. of the mixture. Since 143 eggs is the maximum to be expected from 100 lbs. of good grain feed, you can see extra production when Sterling Egg Mash is added to the ration. Get the extra eggs, especially in winter when the price is high.

Our mash feeds are all sacked in white cotton bags and the tops are sewed, not tied. Sewing is better protection to both dealer and user



Egg Making Capacity of Our  
Protein and Grain Feeds

	Yolks	Whites
100 lbs. Sterling Scratch Feed.	242	143
100 lbs. Sterling Egg Mash	203	295
Total	445	438



## FEEDS for GROWING CHICKS

There are so many millions of chicks hatched each spring and the demand for chick feeds is so great that too little care is many times exercised in the selection of rations. Every dealer knows that there are people in his district who go to considerable expense to hatch several broods of chicks and then assume almost any feed will do to raise them. Feeding is exceedingly important, especially the first six or eight weeks. We have made it easy for dealers to supply a complete line of mashes and grain feeds for each period of growth.

### Sterling Baby Chick Starter

This finely granulated grain feed is the first that should be given to baby chicks. After they are 48 hours old it should be scattered in a litter of fine cut clover or alfalfa, giving them only as much as they clean up each time. Repeat the feeding five times a day, gradually increasing the amount as the chicks grow. Sterling Baby Chick Starter is composed of wheat, corn, kafir and milo maize, peas, millet and steel cut oats with and without grit. This feed is suitable for chicks during the first two weeks in conjunction with Sterling Buttermilk Mash, described on page 100.



### Sterling Growing Mash With Buttermilk

This is one of the three Sterling mashes which have won such a fine reputation throughout the Northwest. It should become a part of the chicks' ration during the sixth week, gradually taking the place of Sterling Buttermilk Mash. It is composed of the same ingredients as Sterling Buttermilk Mash with the addition of alfalfa meal and pea meal. Dried buttermilk remains as an important item.

Keep Sterling Growing Mash before the birds all the time in good, clean mash hoppers. Always feed it dry and they will not overeat. This mash supplies the necessary digestible protein to balance with a good grain ration, like Sterling Growing Feed. This combination maintains rapid growth and supplies the essentials for building well developed bodies and sleek feathers. Like the other Sterling Mashes, it is GUARANTEED TO SATISFY.



### Sterling Chick Feed

This is one of the most popular of our grain feeds and we ship an immense quantity of it every spring. It is milled somewhat coarser than Sterling Baby Chick Starter, and is suitable for chicks three weeks old until they are about six or seven weeks old. It is to be fed during the last three or four weeks of the period in which Sterling Buttermilk Mash supplies the protein elements. Sterling Chick Feed is made from clean, sweet grains, granulated to proper size and mixed to our standard formula. The quality is maintained uniform. Dealers and poultry keepers may depend upon it, year after year, to give the same excellent results.

### Sterling Chick Feed—No Corn

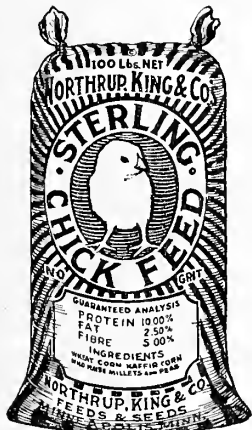
In some localities and for particular purposes there is a demand for a chick grain ration containing no corn. Our Sterling Chick Feed—No Corn—is made to fill this requirement. Its ingredients are the same as in Sterling Chick Feed except that no corn is included. The same care in the selection of materials and blending is exercised as in the manufacture of Sterling Chick Feed, so that every ounce is clean, wholesome feed and every bag is uniform in quality.

### Sterling Growing Feed

This is the scratch grain feed of slightly coarser granulation than Sterling Chick Feed and suitable for feeding during the same period and in conjunction with Sterling Growing Mash. It contains cracked corn, whole wheat, kafir, milo, millet and buckwheat, each in proportion to give balance to the rapid development required of the birds at this time. At about four months, the flock will prefer still coarser granulation, at which time Sterling Scratch Feed can be permanently put on the bill-of-fare.

### Sterling Scratch Feed

This is the standard, high grade scratch grain feed for full grown birds. It is sold all through the year and consequently is one of our largest items. Its formula was created to produce definite results, not to fit a certain low price. There are lower priced scratch feeds offered and when these are placed in competition with Sterling Scratch Feed, we suggest a careful comparison of samples of each. The formula and the integrity of the firm back of a scratch feed are the two important elements to consider in deciding which to sell or feed. Sterling Scratch Feed has always been sold on its merits and its price is always in line with the value it delivers.



## GUARANTEED TO SATISFY

A Guaranty Tag In Every Bag



## THE ONLY WAY TO MAKE MONEY RAISING CHICKS IS TO KEEP THEM ACTIVE AND GROWING FAST.

Sterling Buttermilk Mash is sold only in white cotton bags with red stripes.  
25 lb., 50 lb., 100 lb.



Read Our Booklet "Chicks to Dollars"

IT PAYS to look upon chick raising as a real job. Not that it is a difficult one, but one which requires preparation and some practical knowledge of how to proceed. If chicks are to be raised for layers or for market, the feeding and housing problems should be planned before the broods arrive, since the first few days are very critical. Every chick lost is real money lost. The percentage of chick losses is decreasing each year due to efforts for better care. Dealers can be of real service to their patrons by becoming familiar with the best modern methods of housing and feeding and then passing the information along. Northrup, King & Co. plans to supply its dealers with such information and to also supply them with authoritative printed matter for distribution.

### STERLING BUTTERMILK MASH

The safe feed for Chicks four days old to six or eight weeks

Sterling Buttermilk Mash is especially prepared to contain a large amount of protein elements and bone building feeds carefully blended so as to produce maximum results. Its ingredients are corn feed meal, steel cut oats, bone meal, meat meal, wheat meal, standard middlings and pure dried buttermilk. The buttermilk is not only a splendid food in itself but it corrects bowel troubles, keeps the digestive tract open and clean and aids in preventing white diarrhoea. It is the highest type of digestible animal protein in most concentrated form—rich in vitamins. In its dry form it keeps almost indefinitely and therefore we use it as the foundation for Sterling Buttermilk Mash and Sterling Growing Mash.

The granulation of Sterling Buttermilk mash is sufficiently coarse to absorb the juices in the chick's crop and thus prevents a pasty mass or ball forming there. This is a difficulty experienced with too finely ground mashes.

For best results Sterling Buttermilk Mash should not be fed until the chicks are four days old, and then sparingly at first. A large percentage of chick losses are due to too heavy feeding just after hatching. Give them plenty of water and a small quantity of fine chick grains several times a day in a clean litter when they are two days old. Then at four days start them on Sterling Buttermilk Mash, gradually increasing the period in which the hoppers or feeders are left in the chick houses until it is before them all the time. So long as this mash is kept dry the chicks will not overeat. The exercise derived from the brisk scratching for grains in the litter provides the necessary exercise and if the litter consists of cut clover or alfalfa hay, the chicks will also eat some of the more tender shoots. Late hatched chicks will be able to enjoy green clover or alfalfa.

Sterling Buttermilk Mash is a very popular seller. It has become the standard of comparison for other chick mashes sold in the Northwest. It is advertised in the leading farm papers and poultry journals, and our sales helps for dealers have moved many a ton from their stocks. Both dealer and poultryman are protected as it is guaranteed to satisfy.

### GUARANTY

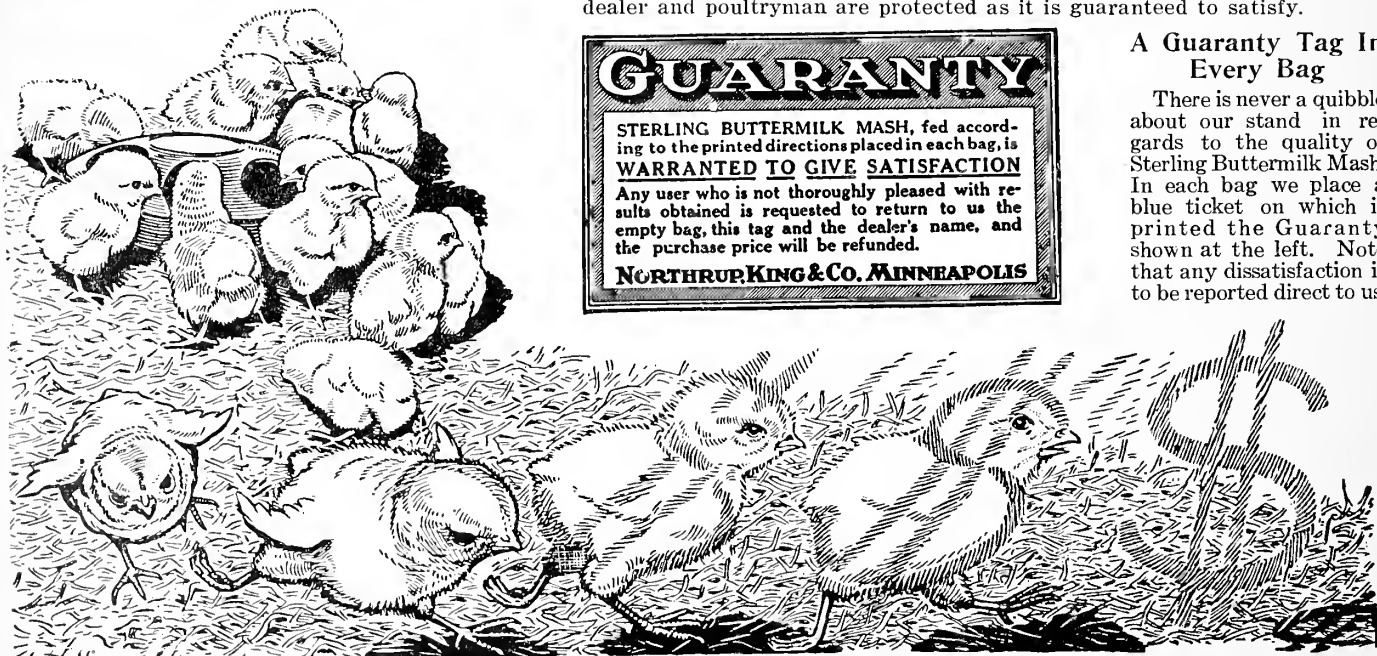
STERLING BUTTERMILK MASH, fed according to the printed directions placed in each bag, is **WARRANTED TO GIVE SATISFACTION**

Any user who is not thoroughly pleased with results obtained is requested to return to us the empty bag, this tag and the dealer's name, and the purchase price will be refunded.

**NORTHROP KING & CO. MINNEAPOLIS**

### A Guaranty Tag In Every Bag

There is never a quibble about our stand in regards to the quality of Sterling Buttermilk Mash. In each bag we place a blue ticket on which is printed the Guaranty shown at the left. Note that any dissatisfaction is to be reported direct to us.



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Made exceptionally well of 3-ply birch panels, well sanded, with holes properly bored for reed uprights. Round, oval and rectangular shapes. Write for list.

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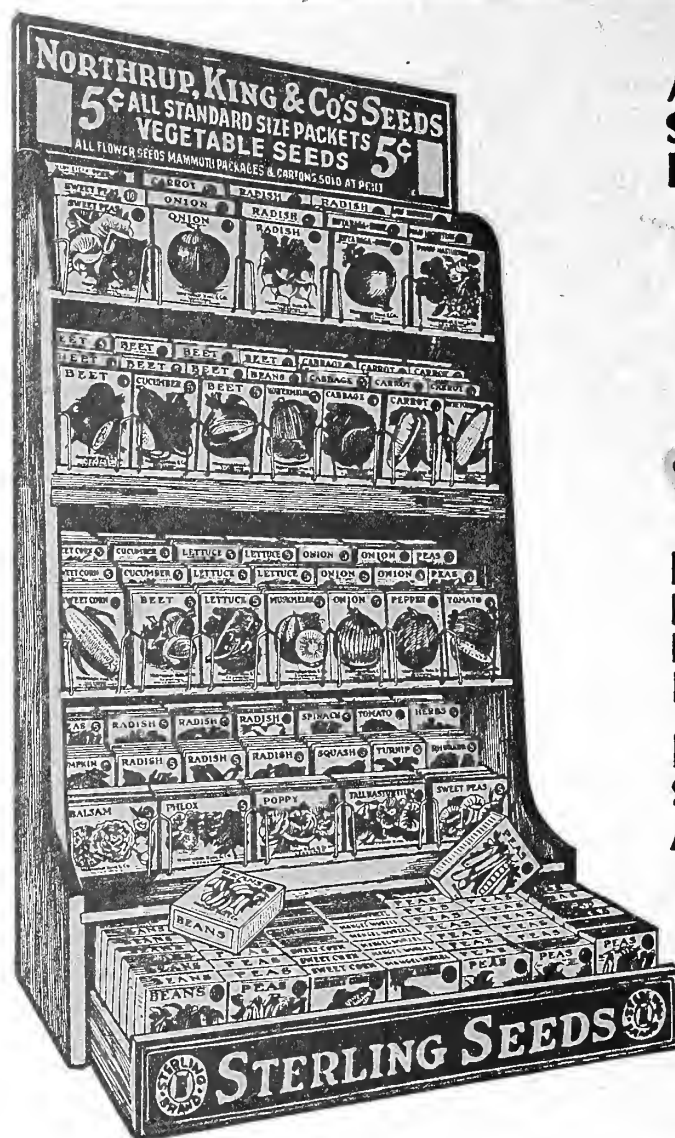
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**T**HESE boxes offer genuine satisfaction to dealer and customer alike. They take very little floor space, so they may be placed in a position in the front of the store where customers can make easy selection. The packets are arranged in rows and tiers, most of the variety names being visible. The illustrations are attractively colored and cultural directions are printed on the back of each packet.

See pages 8 and 9 for further information

**Sold By Local Dealers Only**